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ABSTRACT

Emphasizing career exploration and internship in the community for gifted and talented high school students, a career education project was implemented in three pilot schools in Jefferson County, Colorado. The model was adapted from an existing model which was designed for the regular school population and based on a prototype model developed by Northwest Regional Educational Laboratory. A third-party evaluation was conducted through data collected by site visits, administration of five different tests and questionnaires, and testimonies of participants in the project. Overall, the project was evaluated as being successful in producing both affective and cognitive gains in the students who participated in the project. Some of the weaknesses identified include the following: (1) student's transportation to and from the job sites was difficult in many cases; (2) curriculum was needed to supplement the on-site experiences and other student activities; (3) a more intensive and extensive inservice program for the staff was needed to focus on successful ways of working with gifted and talented students; and (4) most of the instruments proved to be inappropriate for the high ability level of the students involved. Both students and parents strongly agreed that the project provided a good opportunity to learn about careers and real life situations and was a good alternative to the regular school program. (BM)

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ED173614

CAREER EXPLORATION FOR GIFTED & TALENTED HIGH SCHOOL STUDENTS

FINAL PROJECT PERFORMANCE REPORT

March, 1979

PREPARED BY: MS. CAROLYNN CRUSEY, PROJECT SPECIALIST

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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Jefferson County Public Schools
Career Education
1209 Quail St.
Lakewood, Colorado 80215

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SECTION II :

CORRESPONDENCE & EVALUATION

APPENDIX A–G

APPENDIX A

Correspondence Regarding No-Cost Time Extension

JEFFERSON COUNTY PUBLIC SCHOOLS
1209 QUAIL STREET / LAKEWOOD, COLORADO 80215 / (303) 231-2222

July 19, 1978

Dr. Gerald Elbers
Project Officer
U.S. Office of Career Education
7th and D Streets, S.W.
Washington, D.C. 20202

Dear Dr. Elbers:

In July, 1977, the Jefferson County (Colorado) Public Schools received funding from the U.S. Office of Career Education to design and operationalize a program entitled, "Career Exploration for Gifted and Talented Senior High School Students" (6007702785). The funding year commensed October 1, 1977 and will end September 30, 1978. Due to several important factors, we are requesting a five month, no-cost time extension for this grant.

First, although funding was received as of October 1, 1977, the actual project was not formally under way until late November, 1977. The primary reason for this delay was the fact that the person selected to serve as project specialist was not available earlier due to a former contractual agreement.

Secondly, the project was proposed as an 18-week trial of a career exploration program, running in three schools during the entire second semester of the school year (January-June, 1978). Due to the late start, it became necessary to adjust the schedule and only a nine-week trial was completed. This adjustment was the only reasonable alternative in order to allow sufficient time to successfully develop and implement student selection procedures, design student materials, and train necessary staff.

According to evaluative feedback from school personnel, students, and parents, the pilot was very successful. The major drawback, however, in the opinion of those involved, was the fact that nine weeks was not a realistic time frame in which to accomplish all of the program objectives.

In order to complete the original scope of work and to give the program a full 18-week trial during the first semester of the 1978-79 school year, we need the five-month extension. The first semester for schools on traditional schedule is from August 31, 1978 to January 26, 1979 and the equivalent time block for schools on year-around schedule is from October 9, 1978 to February 13, 1979. The five-month extension will take the project through the end of February giving the project specialist ample time to collect and process evaluation data and to complete the final report.

The major expenditures during the five-month extension will be to retain the project specialist, to provide trial schools with services such as materials duplication, secretarial help, local travel, and to assure adequate evaluation of the 18-week trial. Ample funds remain to meet the estimated expenditures.

The no-cost time extension will benefit Jefferson County greatly as we will then have good evaluation data on the program as designed. We believe that having the full trial will also benefit other school districts interested in similar programs.

If you need additional information, please call. We will be looking forward to an early response so that definite plans for the full trial or project close-out can be made.

Sincerely yours,

Robert E. Blum

Robert E. Blum
Career Education Coordinator

REB/mb

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
OFFICE OF EDUCATION
GRANT AND PROCUREMENT MANAGEMENT DIVISION
WASHINGTON, D.C. 20202

NOTIFICATION OF GRANT AWARD

1. NAME AND ADDRESS OF INSTITUTIONS: Jefferson City Public Schools 1209 Quail Street Lakewood, Colorado 80215	3. PROPOSAL TITLE: Career Exploration for Gifted and Talented Senior High School Students, Dated 03/01/77 Amended 08/23/77	6. GRANT NUMBER: G007702785 7. CRS ENTITY #: 1846002817A 7B. DOCUMENT #: G007702785
2. MAKE CHECKS PAYABLE TO:	4. AMOUNT OF AWARD: No Change	7C. PROJECT NUMBER: 554AH70[illegible] 8A. GRANT AWARD IS Revisio..
	5. PERIOD OF AWARD: FROM: 10/01/77 THROUGH: 02/28/79	8B. PAYMENT METHOD: OE Direct Pay 8C.

9. SCOPE OF WORK AND/OR SPECIAL CONDITIONS:

1. This grant revision is issued to extend the period of performance to February 28, 1979 in accordance with Grantee's request dated July 19, 1978.

2. No additional funds are provided by this revision.

3. All other terms and conditions of this grant remain unchanged.

10. GRANT AUTHORITY: CFDA	APPROPRIATION:	FY & CAN:	OBJECT CLASS:	AMOUNT
13.554A	7570270	77 2006605	4145	-0-

NEGOTIATOR'S NAME: Anna Smith

NEGOTIATOR'S PHONE NUMBER: (202) 245-7871

11. NAME OF GRANTS OFFICER:	SIGNATURE OF AUTHORIZED GOVERNMENT OFFICIAL	12. DATE:
Albert Riskin WILLIAM H. HOPKINS	William H. Hopkins	8/18/78

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APPENDIX B

Correspondence with Dr. Abraham Tannenbaum Regarding Program Model

TEACHERS COLLEGE COLUMBIA UNIVERSITY

NEW YORK, NEW YORK 10027

THE MEGA CENTER FOR GIFTED EDUCATION
PROJECT ON THE GIFTED
AND TALENTED

May 1, 1979

Ms. Carolynn Crusey
1209 Quail Street
Lakewood, Colorado 80205

Dear Carolynn:

As I promised, I was going to be somewhat late in reacting to your Learning Manager's Guide, and that is one promise (i. e., being late) I always keep. Seriously, I would have been able to meet your April 26 deadline if CEC hadn't intervened, but I hope my comments are not too late for inclusion in the records.

My overall reaction to the document is enthusiastic for several reasons. It is a superb blend of school and community education, with each element lending strength and dimensionality to the other. Usually, efforts of this kind tend to relieve the school or the community agency of too much responsibility for educating the child. Or even if they collaborate closely, the emphasis is often on basic skills or career development, with little attention paid to life skills which are so important to your program.

Because of the three-pronged thrust of your design, I would see the learning manager serving as an educator-counselor whose role is critical in the entire operation. I was most impressed with the attention to detail concerning things to do before and after the students' arrival. The learning activities conducted by the learning managers are exciting and planned in such a way as to make them almost teacher-proof. Perhaps most important, the unfolding of activities from orientation through the development of projects based on explorations and internships revealed a great deal of meaningful thought by the planning committees under your guidance. I wasn't sure where the orientation period fit into the general time frames projected on page 11, but I assume it is part of the prelude, along with the screening process. Speaking of page 11, your estimated total of 196-348 hours is quite a span. How do you avoid the jealousies and criticisms from classroom teachers who may feel that some of their precious time is being carved out for this program?

Altogether, there is so much meaningfulness to the program and the design for implementation that you may proudly consider yourself a real trailblazer in the field of gifted education. I cannot think of another program that approaches it in significance and sheer inspiration. If the design is fully implemented, the learning manager may turn out to be the single most important educational figure the gifted child will have encountered in Jefferson County.

Having expressed my enthusiasm in the past and having confirmed it in this note, I would like to make a major suggestion and offer a minor criticism. My visit with some of the children in your program has convinced me that you ought

to consider a fourth dimension to the general design. The children should not only absorb the basic and life skills, as well as those connected with career development; they should also engage in formal, intensive studies of the life styles, habits, values, and professional roles associated with the careers they are exploring. They have to know about the work routines of the highly placed professional, his/her manners of dress, ways of relating to colleagues, capacities for tolerating frustration, and even their suitability as spouses for those who expect career and family life to be separate entities of a married person's life. There is also the matter of relating to authority and/or exercising leadership which need to be explored. And there there is the entire domain of values interlocking with career interests. I remember vividly the comment by your budding veterinarian who expressed some dismay over her discovery that the professionals with whom she was interning did not share her love for animals. That set off a number of reflections about the professional collegiality that she might expect in her chosen field. This is only one of many examples of comments relating to membership in a "professional lodge" which had nothing to do with intellectual qualifications. I know that adding another detail to an already rich and vibrant program may stagger the professional staff, but I think the children could be helped by some formal attention to the role requirements for different highly placed professions.

My minor criticism has to do with one of the appendices, namely In-Service Games. It was the only one I found to be less than a joy to read, and I'm not sure whether I can verbalize the reasons for my discomfort. Maybe Bloom's Tax Bingo and Bloomin's Bingo sound icky to my starched ears. Or perhaps the material seems exploitative of the gifted and who they are expected to be, but there is a kind of self-consciousness mixed with cutesy-pie activity that may raise some hackles, especially among those who worry about elitism and the like. As intellectual exercises, you can probably do much better by having children tackle some of the cerebral games that have been cranked out recently by manufacturers or by forcing them to tangle with conflict resolution or in-basket managerial problems. Next to the sensational ideas contained in your other appendices, these left me cold, and I suggest that you phase them out before Ben Bloom stumbles over them and reacts unkindly.

Carolynn, sincerest bravas for producing what has become one of my favorite programs for the gifted. You should feel proud of your contribution to Jefferson County's efforts on behalf of the gifted. Rest assured that I will do my best to continue alerting people in different parts of the country to what you and your colleagues have accomplished in designing a plan which is frankly meant to become celebrated in the field.

Cordially,

Abraham J. Tannenbaum
Project Director

AJT/bms

APPENDIX C

Correspondence with Dr. Joseph Renzulli Regarding Student Selection

The University of Connecticut

STORRS, CONNECTICUT 06268

SCHOOL OF EDUCATION

April 17, 1979

Ms. Carolynn Crusey, Project Specialist
Career Exploration for Gifted/Talented Schools
Jefferson County Public Schools
1209 Quail Street
Lakewood, CO 80215

Dear Carolynn:

I must apologize for not responding sooner to your letter of January 24, but as usual I have been "over extended" and have only recently had an opportunity to review the documents you forwarded to me. I must say that I am once again very impressed with both the careful organization and thoroughness of your work and the way in which you have evolved an operational model out of some relatively sound principles and research information. Not too many people take the time to provide this kind of defensible rationale and as an "academic person" I am always impressed with such an approach. I am also impressed and flattered with your continued reference to my own work and when I see it having an impact in actual programs it somehow or other makes me feel that all of my own efforts have been worthwhile.

A couple of comments — mostly positive. I like your 4-Ring Sign definition and although I feel that task commitment is a non-intellectual characteristic, nevertheless, your model helps to highlight the other traits related to this general category.

Needless to say, I was somewhat disappointed in the evaluator's findings about my rating scales, but this is what research and evaluation are all about and I can live with the consequences of quality evaluation work. I do have one concern however and this may be merely a rationalization in defense of the scales. I know that our scale items are somewhat long but this is the way in which we were able to achieve high inter-rater reliability. The more the items are trimmed down, the larger amounts of inference left in the "eye of the beholder," and the lower the reliability. The evaluators recommend limiting the rating scales to one page and I am afraid that this will further lower the inter-rater reliability. This is somewhat of a dilemma and I simply do not know how to trade off economy for reliability. Many other persons have adapted the scales to suit their own needs and this is certainly fine with me, however, I can only attest to the reliability of the original versions upon which we carried out our own research studies.

I like your idea about "Consistent High Quality Production" as a criteria for entrance into the program and would like to see more done in this regard in other identification systems. I also am pleased with your Product Review Process and feel that you are indeed "high risk takers" to tackle this very tough but highly valid criteria for evaluation.

I am excited enough about your project to put forth a strong suggestion that you think about writing it up for one or more of the several professional journals in the area. A great deal of hard work and even harder thought has gone into this and I feel certain that people around the nation can benefit from your efforts. I certainly would be happy to review such an article for you and offer whatever suggestions might come to mind.

I appreciate your generous offer of an honorarium but this is not necessary since it was my pleasure to review this work. I will, however, take you up on your very kind offer regarding the snow! I doubt seriously whether or not I will be able to make a Western ski trip this year, but will plan next year's calendar with this great opportunity in mind.

Sorry we did not have a chance to chat at the Houston meeting, but I look forward to crossing paths with you on the "gifted circuit."

Sincerely,

Joseph S. Renzulli

Joseph S. Renzulli
Professor of Educational Psychology

sfc

APPENDIX D

Minutes from June, 1978 Debriefing

MINUTES OF DEBRIEFING SESSION - JUNE 12-13, 1978

Exploring Careers in the Community for Gifted and Talented High School Students (ECC/GT)

In Attendance:

Patty Kirby - Learning Manager, Golden Senior High
Jolene Knapp - Learning Manager, Arvada West Senior High
Laura Rothenfeld - Learning Manager, Bear Creek Senior High
Carolynn Crusey - Project Specialist for ECC/GT
Nancy Brown - Project Specialist for ECC/GT Junior High

DEBRIEFING SESSION--June 12 and 13 - Senior High ECC/GT

STUDENT OUTCOMES

Points of Discussion

1. Are the outcomes realistic in terms of time and resources?

   1.) The general conclusion was that the outcomes were adequately met and realistic, with one exception.

   - The exception was the outcome of "Study Skills" (1c). It was felt that in order to succeed in the program, a student must already have excellent mastery of this skill and that in next year's screening it will be considered a course pre-requisite. Teachers agreed that improved study skills would probably be a natural outgrowth of the program, but did not feel they had time to include activities which directly address those skills.

2. Should any outcomes be reworded for next year?

   2.) The following are suggested rewordings for the remaining 12 student outcomes.

   (1a.) Course skills and knowledge

   The objective does not need rewording. The only added consideration is that the principal will have the final decision in the granting of credit. The G/T teachers do not feel the same concerns as the regular program in granting credit because they found that other staff members were willing and able to help G/T students negotiate projects. This relieved the ECC/GT teachers from the burden of granting credit outside their credentialed area.

(1b.) Communication Skills

The objective does not need rewording. The word "organizational" needs clarification in that this objective would provide students with a knowledge of an organizational communication process. The actual experience and/or application with the process would fall under the objective 3b--"Career Knowledge."

(1c.) Study Skills

Omit (see explanation above)

(1d.) Higher-Level Thinking Skills

Reword to read: "Students will distinguish those thinking skills appropriate in a given situation and improve their ability to use higher-level thinking skills (analysis, synthesis and evaluation)."

(1e.) Divergent Production

Needs rewording to read: "Students will investigate career-related situations and use the decision-making process to produce an outcome which is original to the student and acceptable to the field. The decision-making process will emphasize creative alternative solutions."

In carrying out this outcome, teachers felt that examples of "divergent production" were the best tools for communicating the concept to students and community instructors. The vagueness of past definitions has made meeting the objective difficult, both in the learning center and in the career field exploration/internship. One explanation for students might be:

"To use old information to generate new ideas by emphasizing a variety of high quality alternatives."

(2a.) Personal Values

No change needed

(2b.) Decision Making

Leave off the phrase "through application to career decision-making situations." This phrase should be included in the objective 3c--"Career Planning." This leaves the wording "Students will exhibit a knowledge of personal decision-making techniques and processes."--emphasizing the process rather than its application to career planning.

(2c.) Adaptability

Reword--"Students will increase an already exhibited capacity for adaptability in given situations." The underlined words were added because teachers felt that to survive in the program, students needed a capacity for adaptability upon entering. In fact, they felt this capacity was one of the strongest indicators of success in this year's pilot.

(2d.) Development of Independence

Replace the word "task" with the word "learning." It was also reiterated that this should be a definite pre-requisite skill/aptitude and that the emphasis should be on increasing an already exhibited independence.

(3a.) Identifying Career Interests and Aptitudes

Reword to read: "Students will identify personal career interests and aptitudes" (emphasis on identification only; not application).

(3b.) Career Knowledge

No change (emphasis on knowledge; not application)

(3c.) Career Planning

Add the adjectives "short and/or long range" to the word "goals" to clarify. This objective is seen as the place to combine and apply (2b) "Decision Making," (3a) Career Interests and Aptitude" and (3b) "Career Knowledge."

3. Which outcomes should be a priority for next year?

3.) A tally vote was taken, yielding the following priorities. Communication Skills, Course Skills and Knowledge, Higher-Level Thinking Skills, Decision Making, Identifying Career Interests and Aptitudes. It should be noted that Adaptability and Independence are highly valued by teachers, but seen as a pre-requisite (see attached tally).

4. Are the outcomes successfully met through the use of existing strategies and activities?

4.) Teachers filled out a grid which indicated the degree to which the strategies addressed the outcomes. It was found that except in areas in which strategies were omitted (due to time constraints) that the outcomes were easily met thru a variety of strategies. This indicates that the strategies are "on target" as far as addressing the outcomes.

5. Are the outcomes flexible enough for students selected under a variety of criteria?

5.) Due to the fact that the outcomes were considered comprehensive they seemed to meet the needs of all students selected into the program.

STUDENT OUTCOMES	LEARNING STRATEGIES: Group Guidance	Individual Guidance	Exploration	Employer Seminars	Internship	Competency Certification	Pre-written Projects	Individual Projects	Journals
Course skills & knowledge	/	/		(3)					
Communication skills	/	/	/	(2-1)					
Study skills									
Higher-level thinking skills	/	/	/	(3)					
Divergent production				(1)					
Personal values									
Decision making	/	/		(3)					
Adaptability									
Development of independence			/	(3)					
Identifying career interests and aptitudes	/	/		(3)					
Career knowledge			/	(1)					
Career planning			/	(1)					

6. Were any behaviors observed which were not addressed by the outcomes, thus necessitating addition of outcomes?

6.) Staff was not aware of any behaviors in students which were not addressed by the outcomes. However, the recommendation was made to ask this same question of Community Instructors at a future meeting.

PROGRAM

Points of Discussion

1. Staff Selection and Training

   a. Staff Selection

      --A great deal of experience in traditional G/T programs may be a disadvantage in that this program broadens G/T concepts considerably, and strategies are much different than regular G/T model.

      --It was recommended that staff begin with an understanding of ECC and add G/T training later because:

      1) ECC is a better conceptual framework

      2) G/T is not as straightforward and clear an area

      --A teacher with strong psycho/social skills was recommended over a strictly academic teacher.

   b. Training

      --Recommendations for training new staff: short overview of EBCE and ECC models and their relationship. Then begin on adapted G/T model for major emphasis of training.

      --Should stress higher-level thinking skills in order to be able to do a good introduction of thinking skills for students. (taxonomies)

      --Training including Piaget's Developmental theories would be helpful.

      --Training which emphasizes the application of taxonomies to ECC strategies would be helpful, including questioning techniques. (Role modeling was suggested as a way to approach these techniques.)

--Training should also include perspectives on selection of G/T students on a national perspective.

--Theoretical concepts should be included to enhance knowledge of gifted education in general.

--Training in dealing with different types of G/T students (i.e., non-conformist, non-verbal, etc.) would be helpful.

--Seminar, idea-sharing training would be most helpful for continuing staff who are familiar with basic ECC and G/T concepts. Continue updating the model regarding relationship of G/T and ECC concepts in order to reach the best combination.

2. Community Instructor Selection and Training

a. Selection

--Staff reinforced difficulty in availability of G/T mentors in community.

--It was suggested that even though an instructor might not be a divergent thinker that if he/she were given a clear explanation of the process then he/she could decide as to whether he/she could be of value to students in their internship which emphasizes that process. Therefore, it is important to have a clear definition of the divergent process to present to Community Instructors as they are considered for and considering a potential internship.

b. Training

--Staff felt it unreasonable to expect Community Instructors to give up time for training and impossible to gather Community Instructors all together at one time for training.

--Suggestions for alternative training strategies:

- Prior to on-site exploration or internship, students should be trained and understand clearly what they need and expect from the exploration or internship. They also need to be prepared to communicate this information to the Community Instructor.
- Send students to the site with a clear, concise, written explanation of what is expected of the student and Community Instructor as a result of the on-site experience. Then student and Community Instructor can discuss and an appointment can be made if further explanation is needed.
- Host evening open houses periodically at the school and invite Community Instructors. In this way questions and problems can be discussed informally with staff.
- During internship, staff should telephone Community Instructor often to ask if there are any problems, questions, etc.
- A "debriefing" session involving Community Instructors should be held to gain their input and suggestions for Community Instructor selection and training.
- There should be more <u>parent</u> involvement in the program.

3. <u>How Should the Seven (7) Strategies Be Revised?</u>

<u>Guidance</u>

--In an 18-week program, group guidance sessions with counselors were recommended. These sessions deal with such things as: Communication Skills, Problem Solving, etc. <u>Involvement of counselors</u> is vital.

--More time should be spent in orientation dealing with career awareness.

--Harrington O'Shea should be optional to be done any time during the semester.

--Schools are considering the COCIS card sort.

--Guidance activities in ECC Guide work better as get acquainted type activities. Group work with counselors is more effective in actually dealing with group building, conflict resolution, etc. Harrington O'Shea optional.

Exploration

--Due to time constraints, lengths of explorations were cut short and students did not have the time to explore as fully as they should. Staff recommended a concerned effort to increase exploration hours. Two-three explorations in a nine-week program are all that can be expected in addition to internship. However, time did not allow for much sharing among students of exploration experiences and analyses.

--All schools are considering the idea of running an 18-week semester in order to allow more time for exploration.

--Students felt the need for more comparison-contrast between exploration sites. This also would allow for looking at various processes within career fields such as communication networks which apply to all fields in addition to specific career areas.

Employer Seminars

--Staff saw this strategy as being a good means of exposing students to issues and occupations that they have no opportunity of visiting on site.

--Aid in student awareness of life beyond school.

--The schools decided to do more sharing with each other to find speakers. The career education office will compile a list of suggestions and make them available to all schools.

--Field trips were also suggested as a means to greater awareness, before exploration, for larger groups.

Internship

--Staff felt that a clearer definition of "product" needs to be developed so that students, staff, and Community Instructors know how broad the concept is.

--The project format was not an entirely successful way for students to plan the internship. This was partly because they did not know enough about the nature of their experience until they became involved.

--Teachers felt they needed to plan as much as possible before the experience. It was suggested that this be done in the form of a list of activities rather than filling out the entire project form.

--During an internship, the idea of a daily log, explaining how activities were accomplished seemed to work more efficiently.

--The teachers did agree to the value of the project format, therefore, they still wish to have forms. They plan to spend more time working out the format in an 18-week program.

Projects (non-site)

--Golden--written with approval of content area teacher

--Bear Creek--written by content area teacher with approval of learning manager

--The issue of credit needs clarification for students continuing in a 2nd year and for students who do not need three full credits and wish

to opt out of a second non-site project.

--Teachers recommended that a 2nd year could be very beneficial. Students would, for instance, complete a 9 or 18-week internship.

--These issues must be decided by individual schools and building principals.

Project (internship)

--Can be condensed to name, process, site, rational, what you plan to accomplish? Who (or what resource) can help you? What is eventual goal (product)? What did you accomplish?

--A need for more than one activitiy per page if necessary.

--Projects should stress the cognitive products (however, affective outcomes are also expected).

--If a product is intangible, then the process needs to be written in order to share the results with other students.

--Community Instructors were not used in project development as much as anticiapted due to time constraints.

--It was recommended that Community Instructors become more involved in the entire project writing process so as to be more involved in the final evaluation of the product.

--It was recommended that the explanation to Community Instructors (replacing CI handbook) contain a more detailed description of the divergent thinking process, and how it applies to the career-related situation.

Competencies

--The G/T high schools would like to include competencies if time permits in an 18-week curriculum. The present competencies which the students asked for were: Opening and Maintaining a Checking

Account, Income Tax and Social Security Issues, RTD.

--These will be included along with other competencies which have been developed in the district in the learning manager's guide for the upcoming year.

Journals

--The journals were not effective when used for the entire quarter. Therefore, the teachers proposed using them for the first 2-4 weeks while getting to know students and students are adjusting to the program. Then they proposed to make the journal optional for the remainder of term. It was suggested that an assignment be made for a number of journal entries by the end of the term highlighting the major events in the student's experience, but not a weekly assignment.

4. Were Higher-Level Thinking Skills Adequately Taught?

--In general, no. Therefore, the following recommendations were made:

- Teacher training should include more direct use of techniques to reinforce thinking skills with students.
- There needs to be more consistent reinforcement for the thinking skills in all strategies.
- More specific activities and strategies are needed.

--Students did show a growth in the thinking skills through the use of program materials this year, but in general it was felt that the approach should be more comprehensive.

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5. Logistical Details

- scheduling

  --complete student selection earlier so that scheduling is done in advance

- program commitment

  --it was suggested that students be asked to sign a letter of commitment to the program before final selection is made. This would necessitate that students understand the program before actually becoming involved and would alleviate misunderstandings after the program has begun.

- substitute teachers

  --it was recommended that when ECC/GT staff are absent that school staff be used to cover ECC/GT and substitutes be used in content areas. This allows other staff to see and be involved in the program and is easier for a substitute.

- More meetings should be set up with students and parents prior to program to alleviate misunderstanding.

- transportation

  --was a big problem this year. 50% of the students needed transportation. Teachers are waiting to be advised regarding availability of mini vans.

  It was usggested that student "transportation form" be worded more clearly regarding the use and access to family vehicles.

MATERIALS

Handbook

--needs an index

--needs more information on Higher-Level Thinking Skills

Forms

--The forms section is not that useful unless students are able to use the actual forms. They suggested a loose-leaf form for forms to be used as needed and in a separate format from the handbook.

--Various form revisions were discussed. Most forms were seen as useful with some modifications.

--The forms to be eliminated for next year are:

Zone Task Check Sheet--to be replaced with a grid format similar to a grade book entry.

Exploration Guide

--In general the guide was seen to be too structured and very redundant. Many suggestions were made for individual page by page refinements. In general the questions need to be broadened with more room from individual creativity rather than short answer questions.

--It was suggested that the high schools consider the open format of the junior high "cluster analysis" as a place to start in making revisions.

--A packet in the back would be useful.

Pre-written Project

--Again seen as too prescriptive and redundant.

--There is a need for introduction to Project Writing, however, this project only served to acquaint students with procedures for procuring sites for explorations.

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Materials

--In general all materials need revisions toward less structure and more use of Higher-Level Thinking Skills.

--The Learning Manager Guide was seen as very important. Changes for next year should reflect the student material revisions and emphasize Higher-Level Thinking Skills to a greater degree.

STUDENT SELECTION

1. Are selection procedures necessary?

   1.) The G/T selection is necessary so that G/T kids will accept an alternative. Otherwise G/T kids will not opt for an alternative. They want challenge and content for college prep.

   A strong awareness of G/T qualities (not necessarily high grades) must be developed to share with other faculty. Staff awareness must be heightened before nomination to enhance the possibility for the appropriate group of students to be nominated.

2. Did selection procedures yield appropriate population of students for the program?

   2.) It was generally felt that the selection procedures were necessary and that they generally yielded a population of students who could work successfully in the program. However, the students ranking highest in the selection were not the most successful in the program.

   One reason given for this was that adaptability and independence, patience and ability to deal with frustration and communication skills were strongly the most necessary characteristics for success in the program and yet these criteria were not emphasized any more heavily in the selection than the other criteria.

3. Which of the eight criteria were best indicators of student achievement in the program?

   3.) With one exception, all of the criteria were seen as important--but need clarification.

a.) Technical Skill--was not seen as a good criterion because many students, who could benefit from the program, had not reached this level of expertise in any one area. It was felt that this criterion was unduly stringent and should be dropped. Strong interest in an area was suggested as a criterion.

b.) Communication Skills--seen as very important.

c.) Intelligence--seen as important; but the group was not in agreement as to the necessity of IQ testing as a measure for intelligence. Most felt teacher input and a written essay would be more useful.

d.) Creativity--seen as very important. The group considered the possibility of using creativity testing as a measure of intelligence, also. This is based on the research which shows that high intelligence is required for high creativity.

e.) Leadership--The USOE definition of leadership was accepted. This includes strong self image, respect for others interpersonal abilities, in the definition of leader.

f.) Consistent High Quality Production--This criterion must emphasize that product is not always tangible, but that consistency is important.

g.) Application of Knowledge--Reword to "ability to apply knowledge." This criteron should stress that the ability to apply knowledge creatively requires problem solving and divergent thinking.

h.) Career Achievement Skills--Seen as important. (Of the 13 suggested career achievement skills the following were considered the most important:

- drive, energy
- adaptability, flexibility
- initiative

The measurement for these skills should be an interview instead of the Renzulli/Hartmann Scales.

4. What were the strengths of the selection procedures?

4.) The strongest areas of the selection procedures were felt to be the product review and the interview.

- The suggestion was made to eliminate the interview question which forced the student to name the field of interest because it unduly biases against students who have not narrowed their interest area or students who are multi-talented.
- It should be limited to one page for teacher response and twenty minutes of time.
- Teachers felt it was necessary to have a larger blank for reaction to interviewer.
- The other interview questions were found helpful especially the hypothetical questions. The questions do need to be more subtly worded, however. Many students saw through them.
- Questions should be added to ascertain more information on adaptability and independence.
- The suggestion was made to bring in teachers from other G/T ECC programs to help in selection.

5. What were the weaknesses of the selection procedures?

6. Which criteria should be revised or altered for next year?

5. and 6.) The weakest areas of the selection procedures were felt to be the Renzulli scales and the IQ testing.

--The Renzulli Rating Scales were found to be too time consuming for raters and for project staff.

--It was suggested that Behavioral Rating Scales be used, but limited to one page as a nomination form, and the ratings be changed to simply, always, sometimes, and never. This scale should stress independence, adaptability, initiative and drive. It also should have a place for a personal remark at the end.

--It was also suggested that a similar questionnaire (and/or short essay) be developed for the student to fill out on him/herself allowing the student more involvement in the process and requiring a time commitment from the student. It was felt that this questionnaire should be evaluated after the interview so as not to bias the interview.

--It was felt that IQ testing was unduly stringent and that it is okay to measure IQ, but not to establish a threshold. Evidence was given that students with IQ scores lower than threshold did indeed achieve excellently in the program. Therefore, it was recommended that intelligence be measured, a threshold considered, but that all measurements be considered before a student is either selected or eliminated from the process.

--Other IQ measures are being considered (i.e., the D.A.T.). A final decision will be made when NWREL determines how indicative IQ test was this year.

--Other helpful suggestions included showing students a mock interview before personal interviews are scheduled especially emphasizing that the product does not have to be a physical product.

--Divergent Production needs to be specifically stated criterion if it is stated as a learning outcome.

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--The guiding principle should be to design procedures which measure G/T attributes as well as attributes appropriate for success in the program.

6. What time line revision needs to be made?

6.) Selection procedures will be revised with the overall emphasis of shortening the time needed. Revisions will be available for use by September, 1978.

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APPENDIX E

Minutes from March, 1979 Debriefing

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MINUTES OF DEBRIEFING SESSION MARCH 8 and 9, 1979

Exploring Careers in the Community for Gifted and Talented High School Students (ECC/GT)

In attendance:

Diana Beatty - Learning Manager, Golden Senior High
John Harris - G/T Coordinator, Bear Creek Sr. High
Jolene Knapp - Learning Manager, Arvada West Senior High
Nancy Moorehead - Lay Assistant, Golden Senior High
Laura Rothenfeld - Learning Manager, Bear Creek Senior High
Carolynn Crusey - Project Specialist ECC/GT
Dave Mangum - Career Education Coordinator
Harry Morgan - Gifted and Talented Coordinator

Debriefing Session - March 8 and 9 - Senior High ECC/GT

I. Review of program model and selection procedure status as of June debriefing

Last summer's debriefing notes were reviewed as a point of reference. As the notes were reviewed, individuals stressed areas in which their particular schools had modified program activities and procedures since that time. This discussion was valuable for two major reasons

- It clarified those aspects of the program model and the selection procedures which were in tact from school to school.
- Modifications varied from school to school, and the discussion provided an "idea sharing/problem solving" context for the teachers.

The following were major points of discussion:

A. Student Outcomes

1) Are the 12 student outcomes still realistic in light of a second pilot term?

a. It was agreed that the student outcomes, as worded in last year's debriefing notes and incorporated into student and teacher materials, are still realistic and being met adequately. However several outcomes came under discussion as they differed in application from school to school.

- Basic Skills

(1a.) Course skills and knowledge. The objective is being met differently in each school.

Bear Creek - Personnel in this program seek the assistance of academic area teachers to design projects for students to earn course credit in the credentialed area of the academic teacher. Major emphasis is given to credit in the areas of English and Science due to the fact that these are the content areas of the learning managers. Program personnel at Bear Creek feel that the awarding of academic credit, in addition to Career Education/GT elective credit, is essential to the survival of the program.

Arvada West - Personnel in this program award academic credit in the area of advanced mathematics (credential area of learning manager), and elective G/T credit. This school uses the ECC/GT as an option within 2-3 year G/T program. Therefore, awarding of academic credit through ECC/GT is not a focal point for Arvada West students.

Golden - Personnel in this program do not have an assigned period of time to work with students. Therefore, students meet with the learning manager in addition to their regular school schedule. Since academic credit is generally not a need for these students, Career Education/GT elective credit is awarded in most cases. However, as individual needs arise the learning manager does arrange for advanced English credit (her credentialed area).

The group agreed that this outcome should be maintained as an optional outcome to meet specific building and student needs.

(1b.) Communication Skills. This objective remains a top priority for all personnel. In addition, those present agreed that this objective should be combined with higher level thinking in as many activities as possible in order to keep the objective of communication skills at the level necessary for G/T students.

(1c.) Study Skills. Omitted at last debriefing

(1d.) Higher Level Thinking Skills. This objective is also a priority for G/T students at all three schools. There is still concern that not enough activities have been designed to date which specifically address this outcome. (See discussion (Program) teacher training).

(1e.) Divergent Production. This objective is generally understood better this year due to re-wording in student materials. However, there is still concern

that the accomplishment of this objective depends heavily on the career area of the student internship and the degree of background knowledge the student has in that field. Obviously certain fields lend themselves better to divergent production than others. The outcome remains a difficult and yet important goal of the teachers.

- Life Skills

  (2a.) Personal Values
  (2b.) Decision making
  (2c.) Adaptability
  (2d.) Development of Independence

  All the above outcomes remain realistic and are being met adequately.

- Career Skills

  (3a.) Identifying Career interests and aptitudes
  (3b.) Career knowledge
  (3c.) Career planning

  These objectives are also considered realistic and adequately met. However, Golden voiced a concern that 18 weeks is not enough time for a broad sampling of career interests and aptitudes.

2) Are the outcomes successfully met through the use of existing strategies?

The strategies are emphasized differently at the three schools, however it is still generally felt that they are "on target" in addressing outcomes. The one exception is "Higher Level Thinking" skills. It was reiterated that the current strategies and accompanying materials still do not adequately address this important outcome. Teachers feel that work needs to be done at the school level to incorporate Higher Level Thinking skills into more program activities.

B. Program Model

1) Has staff training been adequate?

Training was adequate for the career education component but there are still needs in the area of gifted education. Specifically teachers feel the need for more techniques to include "Higher Level Thinking Skills" and "Divergent Production" into existing career education strategies. It was suggested that the district provide an in-service course specifically for teachers in this program to exchange workable techniques and gain additional background from a gifted/talented specialist.

2. Was Community Instructor Identification and Training adequate?

   a. Identification - The schools voiced a continued frustration with the location of appropriate gifted/talented sites. They are generally working through their own individual sources to add to their "bank" of instructors. They are not finding the existing "bank" and procedures for the use of sites very helpful or workable.

   b. Training - This remains an area of concern. The lack of proper contact with community instructors is mainly a time problem. It was pointed out that many community instructors do not feel there has been enough communication with school personnel. However, the school personnel do not feel they have the time to do an adequate job in this area. Suggestions were given for partially solving this problem:

      . A once a month open invitation for CI's to visit with school personnel
      .. A local school CI advisory council which could assist by providing a communication network
      . Working through organizations such as Colorado Association of Commerce and Industry for communication and location of further contacts
      . Use of short communications, such as "appreciation certificates", thank-you's in school newsletter's, etc.
      . Thank-you lunches or dinners with students and CI's

. The idea which gained the most support from the teachers was that of requiring the student to help set a meeting time between the CI and the Learning Manager as part of the responsibility for exploration and internship.

3. How are the (7) Learning Strategies being used?

a. Guidance - The 18 week term provided more time for guidance activities than the nine week term. All schools reported excellent group building techniques. Also emphasized is the area of "coping with the label of gifted and talented".

b. Exploration - Again, 18 weeks is a much more realistic time frame for individual career exploration. The teachers raised the issue that for some students, many short explorations, each with a resulting product, are more valuable than requiring the internship. This was viewed as a function of "readiness" in a career knowledge sense rather than a function of giftedness. Even the most gifted/creative students, in the teachers opinion, prefer, in some cases, explorations to internship.

- The requirement of an Exploration Analysis is used in tact at Golden. It is incorporated into an anthology available to other class members.
- At Arvada West this takes the form of a "reaction paper" written with the CI as the assumed audience. • At Bear Creek the analysis takes place in an oral discussion with the Learning Manager. This was necessary at Bear Creek due to the priority given to "course credit projects". There was not time for students or teachers to deal with both exploration analysis and course credit projects in written form.

c. Employer Seminars - This strategy was expanded at all three schools to include topics not directly related to "careers" and yet applicable

to the gifted program. • At Bear Creek topics included such areas as "male and female roles", and "Assertiveness". • Arvada West assigned students the task of generating their own topics, submitting a proposal for a seminar with objectives, planning the seminar, and presenting the seminar. This often included informing other students about the major issue of the seminar and assigning fellow students activities for gaining background information prior to the seminar. Topics ranged from "Death and Dying" to "Alternative Energy Sources". • Golden's major seminar topic was "Creativity", a series of seminars was arranged around this topic, which was chosen by the students. Another topic explored in seminar was "consumer economics".

d. Internship - As stated previously the strategy is very successful for some students and only moderately for others. Teachers again stressed the idea that some of their most gifted/talented students felt more of a need to sample many careers than to focus in depth.

The development of a product varied in success, depending on the career field of interest, but the objective of "divergent production" is still held as a goal for most students involved in this strategy.

Location of appropriate internship sites remains a problem, but teachers did feel that contacts were increasing, often located by students themselves.

e. Projects - (non-site) See discussion under "Student Outcomes -- Negotiation for Course credit"

f. Compentencies - This strategy has always been an optional strategy included in the Learning Manager's Guide for those students wishing to work on

competencies. None of the teachers found time to use this strategy this term. There is also a concern that the format is below the capability level of many students. This is most likely because the competencies were written for the standard ECC program and not adapted for G/T use.

g. Journals -
- Bear Creek does not find this strategy useful. This is partly due to the fact that there is much oral conferencing with each student.
- Arvada West altered format to a letter format written personally to the Learning Manager three times a quarter. This method is very successful.
- Golden sees this as an essential strategy due to the fact that the Learning Manager does not have a regularly scheduled block of time with students.

4. Were Higher Level Thinking Skills Adequately addressed?

As discussed earlier, the answer is still generally, no. The same concerns remain since last June's debriefing. The problem mainly centers around lack of teacher training in this area. (See Student Outcomes-Higher Level Thinking, and Program - Staff Training).

John Harris, from Bear Creek offered to share several bibliographic sources for teacher reading in this area.

5. What logistical problems remain?

a. Scheduling and staffing

This is still a problematic area, however, each school is working toward realistic scheduling for staff and students. The following descriptions highlight the major scheduling, staffing components at each of the three schools:

Bear Creek

This program operates presently in a 3-hour block during the morning. The program is staffed with 1 or 2 learning managers and a G/T coordinator who shares his time with ECC/GT

and an in-school G/T pilot program.

Selected students elect this program and are scheduled for a three hour block of time. During this time they work on program assignments both in the lab and at community sites. Mondays and Fridays are generally in-lab activities. Tuesday, Wednesday and Thursday are generally used for on-site activities. Bear Creek is looking at the possibility of reducing the number of program hours to one or two hours. This time would then be devoted to in-school activities. The on-site time would then be required as "homework" to be done after school hours or as the student's school schedule permits.

Arvada West

This program operates as an option for students within a previously established G/T program. The G/T program operates for a two hour block of time in the afternoon. The ECC/GT option within the program is staffed by one learning manager with the assistance of a G/T coordinator who has responsibility for the larger G/T program.

Selected students elect this program for either one or two hours. Previous to ECC/GT experience students participate in a G/T orientation class. From this experience they choose either to become involved with ECC/GT or to work on academic independent research. Some students choose a combination of ECC/GT and independent research, and all students in the larger G/T program interact with one another during program hours for such activities as seminars and group building activities. On-site work is arranged as students' daily schedules permit and after school hours.

Golden

This program operates without an assigned block of time. The program is staffed with one learning manager who meets with students during her free time. Because Golden has modified modular scheduling, the learning manager is free approximately three class hours daily, and students are free during variable hours within their day.

Selected students elect this program in addition to their class schedule. Group meetings and seminars are arranged as "after school activities". Written work and one-to-one counseling takes place on a variable schedule as students can meet with the learning manager. On-site work is arranged as students' daily schedules permit and after school hours. Golden is hoping that in the future, school scheduling will permit at least one or two hours of common time between students and learning managers.

b. Aide-time

Due to project funding, all three programs staffed a four hour lay-assistant. At Bear Creek and Arvada West this lay assistant worked, at least in part, during program hours. At Golden, the lay assistant was available during the morning hours. The lay assistants were generally involved with scheduling student appointments with learning managers and community sites and providing necessary clerical assistance to the learning managers. The program lay assistants were unanimously considered a major key to the success of the program. Presently, since project funding has ended, the individual schools are negotiating with administrators to maintain lay-help for their programs.

c. Transportation

Transportation is still a problem with the added information regarding district policy on "Students as Drivers for Other Students". District policy states that students under 18 must not drive with other students under 18 to school related activities. In most cases students are forced by this policy to drive alone to sites or arrange rides with RTD, volunteer parents or school-dispatched buses.

d. Local Building Rapport

Staff relationships within each building are still delicate in some cases. Teachers sited the fact that funding required quick implementation of a pilot, which prevented a slower building of rapport with other staff members. However, Arvada West testified to the fact that the longer the program is in

the building (their G/T program has existed for 3 years), the more support is gained, both among staff and students.

Golden used the very effective technique of producing a monthly newsletter for distribution among staff, parents, community, and other students. This newsletter contained personal anecdotes written by the students in the program, describing and analyzing their career exploration experiences. This was accomplished fairly smoothly by gathering written work submitted by students to earn program credit.

The general effort toward building staff rapport is guided by the assumption that this program needs to be accurately described and find a comfortable "fit" into the total building curriculum. Every effort is being pursued toward this goal in each building.

C. Materials

Due to the fact that project funds do not allow for a second materials revision, program materials were discussed as to their use or non-use. Teachers were encouraged to revise and add materials as the needs arise.

The major concern at last year's debriefing was the amount of paper work and clerical work required by the students and learning managers. This is still a concern, however, each learning manager is "cutting down" as his/her program evolves.

The career education department still has large quantities of most program forms, with the exception of the Student Handbook. Teachers were encouraged to re-order existing materials as needs arise. Based on the re-orders to date, the most widely used student materials are: The Student Handbook, Student Information Card, Monthly Calendar Worksheets, and CI Report Cards.

Each school also received a current Student Selection Procedural Manual and a Learning Manager's Guide for each learning manager.

The following is a complete list of student and teacher materials available through the career education department.

STUDENT MATERIALS

Student Handbook (small quantities)
Student Information Card
Monthly Calendar Worksheet
L.M. Appointment Sheet
Progress Report
Final Grading Sheet
CI Memorandum (exploration)
CI Memorandum (internship)
CI Report Card
Project Form (page 1)
Project Form (page 2)
CI Contract
Exploration Guidelines
Cluster Handbooks
CI Handbooks
Sign In/Out Sheets
Student Weekly Plan
Learning Style Self Assessment

TEACHER MATERIALS

Student Selection Paper
Learning Manager's Guide

D. Student Selection

1) Are selection procedures necessary?

There is still agreement that selection is necessary for the same reasons cited in the June debriefing. There is still a strong need to appropriately raise school staff, parents and student awareness regarding a "gifted and talented" definition and program philosophy. As mentioned before, this is at times a delicate issue, and yet essential for nomination and selection to be accurate and meaningful. As the district comes closer to a unified approach in this area of "awareness", there is optimism that individual school procedures for selection will be accomplished more smoothly.

The second year's selection paper came much closer to the total district approach to selection of "gifted and talented". This is seen as a step in the right direction because a standard definition is essential in an effort to unify a district philosophy of gifted and talented" for similar selection criteria and measurement hopefully assures that similar populations are identified from school to school.

2) Did selection procedures yield appropriate populations of students for the program?

Staffs felt more comfortable using procedures for the second time, especially since they were more aware of the program requirements and had had at least one year of experience in dealing with gifted students. Not all gifted students find the program meaningful and likewise not all selected students are successful in the program. One year's experience helped staff council students as well as selecting students.

Bear Creek made a conscious effort to differentiate between students who they determined to be gifted according to definition and measurement and those with high potential who could benefit from a career program. As many students as possible were selected for program participation. The gifted label was consciously avoided until the students could show further evidence through participation in program activities. Even then the "label", was only attached for transcript purposes, if the student wished such

a designation on his/her transcript and in the opinion of the staff demonstrated evidence of giftedness/talentedness during program participation.

3) Were the criteria for selection good indicators of student achievement?

Again, one year of experience aided staff in applying selection criteria during selection. The simplified model for criteria was viewed as helpful because it was easier to manage all four areas of the model (above average general ability, creativity, task commitment and non-intellective traits) were seen as important.

4) What were the major strengths of the selection procedures?

a) The fact that the procedures were less time consuming than last year was the biggest new asset. However, there is still a feeling that procedure could be even further streamlined. Some suggestions were:

- involve more trained staff members so the burden does not fall on a small group. (This also has obvious implications for heightened staff support and awareness).
- find ways to cut down on the paper work (key punch the standardized items and computerize data collection).

b) The interview and product review were still considered the major strengths of the procedures.

- The open-ended format for the interview was seen as more successful than the standardized questions of last year. However, it required a sound understanding of the selection criteria and their shades of meaning.

5) What were the weaknesses of the selection procedures?

There is still discontent over intelligence testing (Otis Lennon Mental Abilities Test) and the Renzulli Hartmann Scales.

- Discussion on intelligence testing ranged from school to school. Some see it's necessity as a check and balance to a more subjective measurement and others still view it as unnecessary and/or misguided. Bear Creek is currently compiling results from a study which they pursued, comparing students selection using Otis Lennon versus selection without Otis Lennon. The results are not available as yet, but John Harris

will submit them to Harry Morgan. The group reached a consensus that the issue will probably never be completely resolved due to personal philosophies. However, there was an agreement that procedures should be standardized from school to school. Therefore, a district stance on use of Otis Lennon or any intelligence testing should be made clear if possible.

- The Renzulli Scales were also viewed differently from school to school. Bear Creek and Arvada West find them to be cumbersome, easily misunderstood and in some cases prone to biased response and invalidating. Golden finds them useful as input from parents and other staff familiar with the student.

  It was pointed out that some of the problems at Bear Creek and Arvada West might stem from lack of proper introduction and instruction in the use of the forms before parents and teachers fill them out. However, it was reorganized as a time consuming process by all.

  Also, it should be mentioned that the group was in favor of some form of input from parents and other teachers, however, no one is aware of a valid substitution for the Renzulli Scales at present.

II. Where does the program go from here?

- Is it feasible to operate without funding?

  Both Arvada West and Bear Creek are planning to operate beyond funding. This is partly due to the fact that both schools have a larger G/T pilot operating, for which this is an option. There is also administrative support for such a program at these schools.
- Golden is in an unsure posture. The program has strong administrative support but at present no large G/T program with in which to operate.
- This brings up the phenomenon that the two schools with gifted pilots (Bear Creek and Arvada West) are in a better position to support this ECC/GT option than a school with a regular ECC pilot (Golden). It is too soon to make any generalizations based upon only three schools, however it is a phenomenon to consider.

  Paradoxically, however, one school, Bear Creek, found a large enough

need among non-gifted students, that they are also planning to offer a regular ECC program available to a wider population.

It is also important to mention that so far, two schools outside the original pilot are considering the addition of a G/T component to their programs in order to begin meeting the needs of gifted students in their building.

The only conclusion that can be drawn from this evidence is that the combination of gifted/talented education and career education in some form or other seems to apply to a variety of situation.

The major concerns in operation beyond funding are two fold:

1.) The programs don't feel they can operate very effectively without lay help
2.) The programs are concerned about continued site recruitment, scheduling for student at sites and maintenance.

These issues are both related in the sense that the lay assistants provided major support for item 2.

These issues cannot be easily answered at this point, due to the fact that the district is still witholding firm commitments to program support until pilot information has been studied.

The in-school gifted/talented pilot and the regular career education pilot are basically in the same position. However, the gifted and talented program is gaining the support of the Library Media department, and this might lead to some staffing support from library media at the school level, specifically in the area of site recruitment, maintenance and scheduling sites for student.

III. Discussion of Proposed Key Features

A. The proposed ECC key features for the regular ECC program were presented. The group was asked to review them and comment upon whether they felt these key features accurately described the ECC/GT program. It was proposed that if they were in agreement with the key features of ECC, a list of additions could be made which allowed description of the ECC/GT adaptation.

B. The group agreed that the ECC key features did not accurately describe the program, and rather than adding to them, we would be wiser to generate our own unique set of key features describing the ECC/GT program as a unique program.

C. It was added that there already is a key features list in existence for the G/T pilot programs. This list includes items which describe ECC/GT as well as the larger G/T pilot for which ECC/GT is an option. Therefore, it might be more accurate to use the G/T key features as a basis upon which to add ECC/GT key features rather than using the ECC key features as such a base.

D. Since a set of G/T key features was not readily available, the group decided to familiarize themselves with the G/T key features, make additions as necessary and return comments, deletions and additions to the central staff. The central staff would then combine the proposed changes into a set of ECC/GT key features, to be submitted to the group for comment at a later date.

E. The procedures outlined in D above are being followed. Individuals are presently being asked to make the proposed changes. Submission to the group has not occurred as yet.

APPENDIX F

Evaluation Plan

Career Exploration for Gifted and Talented High School Students
1977-78 Summative Evaluation Plan

The purpose of summative evaluation is to gather data to determine the extent to which students achieve student outcomes

Student Outcomes	Indicator of Achievement/Rationale/Example	Measurement	Responsibilities
BASIC SKILLS			
Course Skills and Knowledge			
1 a) Students will analyze course objectives and negotiate individual learning plans with subject area teachers for each course for which credit is received.	Under this objective, students will negotiate course credit in academic subjects with subject area teachers. The indicators of achievement will be determined by the teacher and written into a learning plan. An example of a negotiated credit follows: A student wants credit for poetry. The course is nine-weeks long and carries ¼ credit. The objectives include successful writing of four types of poetry, including haiku, ballads, sonnet, and free verse. The student agrees to write the poetry in completing the weekly journal.	Teacher will review student work against criteria established during negotiation, i.e., course objectives for determined subject areas.	Project staff will collect the sample projects and make them available for review.
		The project will evaluate selected student projects negotiated to gain course credit.	The evaluator will review the sample projects, interview selected teachers and students and prepare a brief report summarizing student achievement in this area.
		Field-based test items will be developed to measure student learning observed during this aspect of the program.	The field observers will develop items which indicate student learning and will post-test program participant and control group.
		Staff and parent questionnaire.	Administered by project staff.
		* Baseline data.	Summarized and analyzed by the external evaluator.
		* NOTE: Baseline data will be collected through the Student Background Questionnaire and the Student End-Of-Year Questionnaire.	

Career Exploration for Gifted and Talented High School Students
1977-78 Summative Evaluation Plan

The purpose of summative evaluation is to gather data to determine the extent to which students achieve student outcomes

Student Outcomes	Indicator of Achievement/Rationale/Example	Measurement	Responsibilities
(Communication skills--continued)	Interpersonal--continued real situations in the interactions they encounter with adult members of the community through explorations and internships. ORGANIZATIONAL. In the area of organizational communication, students will recognize the various forms of organizational structures which exist at community sites such as corporate structures, bureaucratic structures, small business organization, etc. They will identify lines of communication within each structure, and analyze effects of communication efficiency and breakdown as they observe these dynamics at the community site. ORAL. In the area of oral communication, students will demonstrate effective oration techniques when they present the product from their internship experience to groups of fellow students and other audiences. Oral presentations will include effective use of audio-visual techniques when they apply. Further development of oral communication will be demonstrated by individual students as the need arises in individual explorations and internships.		

Career Exploration for Gifted and Talented High School Students
1977-78 Summative Evaluation Plan

The purpose of summative evaluation is to gather data to determine the extent to which students achieve student outcomes

Student Outcomes	Indicator of Achievement/Rationale/Example	Measurement	Responsibilities
COMMUNICATION SKILLS			
1 a) Students will be able to effectively send and receive communication through use of the following forms: written, interpersonal, organizational and oral.	Under this objective, students will demonstrate effective communication through use of written interpersonal, organizational, and oral forms of expression. WRITTEN. In the area of written communication, students will demonstrate knowledge of correct grammar, spelling, usage, sentence structure, and proper format in various written forms such as business letters, resumes, job application forms, and narrative journal entries. Student writing will be evaluated by the learning manager and students will revise writing for continued improvement. INTERPERSONAL. In the area of interpersonal communication, student will demonstrate knowledge of group dynamics by participating in groups both in the classroom and at the community sites. They will analyze the various roles and individual contributions within a group, such as leader, organizer, listener, and summarizer. They will also recognize the various functions of the groups in which they participate, such as reaching consensus, organizing for a task, conflict resolution, and trust building. Through guidance activities with the learning manager and then apply these skills to (continued on following page)	Teacher will review student's written work against criteria for acceptable written expression (i.e., proper business letter form). Field-based test items will be developed to measure communication in interpersonal, oral, and organizational areas. Staff, parent, and community questionnaire.	Project staff will collect sample forms of communication expression and take them available for review. The field observers will develop items which indicate student learning and will post-test program participant and control group. Administered by project staff. Summarized and analyzed by the external evaluator.

Career Exploration for Gifted and Talented High School Students
1977-78 Summative Evaluation Plan

The purpose of summative evaluation is to gather data to determine the extent to which students achieve student outcomes

Student Outcomes	Indicator of Achievement/Rationale/Example	Measurement	Responsibilities
STUDY SKILLS			
c) Students will improve study skills for use within and outside of school setting.	Under this objective, students will improve study skills for use in school and outside school. Students will demonstrate knowledge of proper research techniques by gathering information from a variety of sources (people, places, and reference materials), sorting information and organizing the information so that it can be useful to them in solving career-related problems and answering occupational questions. For example, students will list and describe several sources of occupational information and describe the advantages and disadvantages of each in answering occupational questions unique to each student.	Student research will be checked against criteria that indicate good study skills, including thoroughness, organization of the reports, adequacy of references, etc. The school staff will make this judgement.	Field-based observers observe students doing research and will establish definite criteria and measurements for evaluating student achievement of this objective.

Career Exploration for Gifted and Talented High School Students
1977-78 Summative Evaluation Plan

The purpose of summative evaluation is to gather data to determine the extent to which students achieve student outcomes

Student Outcomes	Indicator of Achievement/Rationale/Example	Measurement	Responsibilities
HIGHER-LEVEL THINKING SKILLS			
1) Students will improve ability to use higher-level thinking skills (analysis, synthesis, evaluation).	Under this objective, students will increase ability to use higher-level thinking skills through exposure to a taxonomy of higher-level learning processes to school assignments and career-related explorations and projects. For example, students will prepare a list of questions regarding a career to be explored in the community using lower levels of learning (cognitive, comparison, etc.). Then students will complete the same assignment using higher-level thinking skills (analysis, synthesis, evaluation). Students will distinguish differences in the questioning techniques. Based on practice through in-school activities such as this, students will than utilize the higher-level thinking skills in subsequent career-related activities (explorations and internships).	Field-based test items will be developed to measure observed learning in this area.	The field observers will develop items which indicate student learning and will post-test program participant and control group.

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Student Outcomes	Indicator of Achievement/Rationale/Example	Measurement	Responsibilities
DIVERGENT PRODUCTION			
a) Students will investigate and provide solutions to career-related problems. 1) Students will present alternative solutions which could lead to further in-depth study. 2) Students will complete in-depth work on at least one solution arising from #1 above. 3) The solution will show originality.	Under this objective, students will work on either individual or small group pursuits of real problems in various career fields. Students will demonstrate adequate technical knowledge and problem-solving skills to approach the problem in a similar manner to professionals in the field. For example, a small group of students might prepare a television commercial advertising a given product. After developing the idea, students might actually prepare the graphics, script, etc., for a broadcast quality videotape.	Field-based test items will be developed to measure student learning observed during this aspect of the program. After the internship, student projects will be evaluated based on criteria established with the student, community instructor, and learning manager during the planning of the internship project.	The field observers will develop items which indicate student learning and will post-test program participant and control group. Project staff will collect sample products and make them available for review. The evaluator will review sample products and make a brief report summarizing student achievement in this area.

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Student Outcomes	Indicator of Achievement/Rationale/Example	Measurement	Responsibilities
PERSONAL VALUES			
2 a) Students will demonstrate an awareness of their personal values (those goals, desires, attributes, environments and rewards which they hold in high regard. They will demonstrate a respect for differing value systems and demonstrate knowledge of the implications their own values have on career opportunities.	Under this objective, students will assess through personal inventory and group discussion the components of their own value system (i.e., attributes, goals, desires, environments and rewards they hold in high regard). They will list possible sources for these values and anticipated factors which would effect or change these values. In explorations and internships, students will analyze the values apparent in people and careers they observe. They will compare the compatibility of their own self-assessment with those values they observe. For example, students will describe those personal qualities about themselves which will enhance or inhibit their personal concept of success.	SAO Self-Assessment Skills Test.	Administered by school staff (pre- and post-). Reviewed by evaluator. Administered as a post-test, summarized and analyzed by the evaluator.

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Student Outcomes	Indicator of Achievement/Rationale/Example	Measurement	Responsibilities
DECISION MAKING			
2.3) Students will exhibit a knowledge of personal decision-making techniques and processes through application to career decision-making situations.	Under this objective, students will demonstrate knowledge of good decision-making processes through making actual decisions and plans in such activities as listed below: Students will set a personal, occupational or life-style goal, consider the alternative plans for reaching the goal, list and/or describe the resources needed to accomplish each alternative list and/or describe roadblocks to accomplishing each alternative, describe the values that caused setting the goal, and decide on an approach to reach the goal. Students will list the most important factors when choosing an occupation and describe the personal values that caused the listing of the particular factors. Students will compare parental and personal values related to particular occupations. Students will describe the decisions that teenagers must make in high school that will determine career, occupation, and life-style within a few years after high school.	Career Decision-Making Skills Test. Field-based observation will be used to ascertain appropriate measurements for the application of the decision-making process in the field.	Administered as a post-test by project staff. Evaluator will analyze. The evaluator will develop appropriate measurement via field-based observations.

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Student Outcomes	Indicator of Achievement/Rationale/Example	Measurement	Responsibilities
ADAPTABILITY			
1.a) Students will exhibit capacity for adaptibility in given situations.	Under this objective, students will anticipate situations in which they would have to deal with flexibility (i.e., adapting to unexpected "road blocks" in a planned course of events). For example, in the classroom all students will participate in student groups to "role play" hypothetical career situations where flexibility could be demonstrated. In journals, they will record suggestions for varied alternative actions in given situations. Using this "classroom" experience as a springboard, the students will then record examples of their own flexibility in their actual explorations and internships as well as the flexibility they observe in others in these encounters. For example, students will choose an occupational field of personal interest and describe the patterns of movement, growth, change, and progress for individuals in the field.	SAQ	Project staff will administer on a pre- and post-basis and will analyze.

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Student Outcomes	Indicator of Achievement/Rationale/Example	Measurement	Responsibilities
DEVELOPMENT OF INDEPENDENCE			
2 d) Students will demonstrate an increase in independence (initiative, resourcefulness time management) and in assuming responsibility for carrying out and evaluating tasks.	Under this objective, students will generate their own time line for the nine-week course in which they plan the sequencing and length of time commitment for the completion of program requirements. Students will analyze and evaluate, through journal entries, the degree to which they operate independently in situations they confront during their involvement in the program, by comparing the number of times they seek direction and/or guidance to the number of times they act upon their own initiative. This activity does not discourage guidance. It does, however, encourage a movement in the direction of independence, when appropriate. Students will distinguish between actions appropriately initiated without guidance and those actions regarding guidance.	Student record-keeping of time management: i.e., calendars, weekly plans, journals, time contracts.	Project staff will collect sample student weekly plans, journals, etc., and make them available for review. The evaluator will review above student materials and journal entries and prepare a brief report summarizing student progress in these areas.
		Assessment Skills Test.	Administered by project staff as a post-test. Evaluator will analyze.

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Student Outcomes	Indicator of Achievement/Rationale/Example	Measurement	Responsibilities
IDENTIFYING CAREER INTERESTS AND APTITUDES			
1 a) Students will identify personal interests and aptitudes and relate them to career opportunities.	Under this project, students will identify through personal inventory and group discussion and guidance activities their personal interests and aptitudes. In explorations and internships, students will observe and analyze the personal interests and aptitudes apparent in the people they observe. Students will determine the relationship of their own interests and aptitudes to those interests and aptitudes needed in the careers in which they become involved. For example, students will list those interests and aptitudes they possess which will tend to enhance or inhibit occupational success in chosen career fields.	SAQ Career Awareness Skills Test.	Administered by project staff on a pre- and post-basis. Administered by project staff as a post-test. Evaluator will analyze results of both instruments.

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Student Outcomes	Indicator of Achievement/Rationale/Example	Measurement	Responsibilities
CAREER KNOWLEDGE			
3 b) Students will increase their knowledge of occupational opportunities.	Under this objective, students will gather information on opportunities available in a large number of occupational fields. For instance, students will describe the work activities, work conditions, life-style, personal freedoms, personal rewards, interpersonal relationships, management strategies for a variety of careers. They will use a variety of resources to gather this information including personal observation and published material, and they will compare the information they gather for each field they describe.	Field-based test items will be developed to measure student learning observed during this aspect of the program. Staff and parent questionnaire.	Field-based observers will develop items and they will be administered to program and control group on a post-only basis. Evaluator will analyze results. Project staff will administer. Evaluator will analyze.

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Student Outcomes	Indicator of Achievement/Rationale/Example	Measurement	Responsibilities
CAREER PLANNING			
1.1) Students will increase their knowledge of requirements for entering and progressing and effects on life-style of various occupational fields, and will set personal goals and plans based upon this information.	Under this objective, students will gather information on a large number of occupations as to the requirements necessary for entering and progressing through the occupational field. To do this students will consult published information on many fields, and personally observe and analyze several fields in their exploration and internship. Students will practice employability skills needed for the career fields of their choice such as locating openings, application, interviewing, on-the-job negotiation, advancement, etc.	SAQ Career Decision Making-Skills Test. Community, staff, and parent questionnaire.	All instruments will be administered by project staff. Evaluator will analyze results of each.

APPENDIX G

Final Evaluation Plan

Policy Studies in Education
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EXPLORING CAREERS IN THE COMMUNITY FOR GIFTED AND TALENTED SENIOR HIGH SCHOOL STUDENTS

FINAL EVALUATION REPORT

Prepared for the

JEFFERSON COUNTY PUBLIC SCHOOLS
Lakewood, Colorado

March, 1979

A Division of the Academy for Educational Development

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INTRODUCTION

INTRODUCTION

The Jefferson County Public Schools contracted with Policy Studies in Education (PSE) to perform a third-party evaluation of the senior high school Exploring Careers in the Community for the Gifted and Talented (ECC/GT) Project. The Project was operated for the first time in the spring of 1978, and this evaluation report deals with the Project as it was conducted at that time.

The Northwest Regional Educational Laboratory (NWREL) also performed a third-party evaluation of other segments of the ECC Program and has presented its findings in a separate report, Evaluation of the ECC and ECC/GT Programs in Jefferson County Public Schools (as submitted September 15, 1978). However, since many instruments developed by NWREL were used by PSE in this evaluation and by NWREL in its evaluation of other Program segments, some data on this senior high school ECC/GT Project are presented in NWREL's report. All instruments with tabulated responses (broken down by ECC and ECC/GT Program segments) are included in the Appendix to that report and might be interesting to the reader if greater detail is desired.

PSE would like to thank Thomas R. Owens and Sharon K. Owen of the Education and Work Program at NWREL for their assistance in tabulating and performing statistical analyses on much of the data included in this report.

In addition to a variety of questionnaires and tests used with participating students, their learning managers, parents, and community instructors, PSE staff made a two-day site visit to Jefferson County in order to gather firsthand impressions of the Project. We feel that site visit report is extremely valuable in understanding and judging the success of the Project in its first semester and have included it as the first section of this final report. The second section--the end-of-the-year report--begins with a profile

of participating students, followed by the evidence of student learning from the Project and testimony about the Project from various participating populations.

We have chosen not to write a final section of recommendations for the Project because we have woven many recommendations throughout the entire report and closely connected those recommendations to the evaluation findings which led us to make them.

SITE VISIT REPORT

On May 30 and 31, 1978, PSE staff visited Jefferson County in order to interview students, learning managers, administrators, parents, and community instructors involved in the Exploring Careers in the Community for the Gifted and Talented (ECC/GT) Project. PSE staff interviewed these Project participants face-to-face either in school or at their places of work and asked them a number of specific questions about the Project. Their responses--along with PSE's recommendations--are discussed in this site visit report under the following topics: (1) Project goals; (2) publicity and recruiting; (3) Project components; (4) student materials; (5) Project staffing; and (6) Project strengths and weaknesses.

Project Goals

PSE staff felt that most participants had a very good understanding of Project goals. Most of the people we interviewed were able to cite a number of particular goals--usually expressed in terms of student learning outcomes--such as:

- understanding of a specific career which might be of interest to the student in the future;
- identification of pros and cons of a specific career being explored;
- clarification of personal career goals;
- development of independence on the part of the student;
- improvement in communication skills, particularly verbal skills;
- understanding the importance of written communication skills in virtually all careers; and
- development of interpersonal skills.

Based on PSE staff's impressions of the students who were interviewed and the testimony of both the students themselves and their learning managers, parents, and community instructors, we feel that the majority of students were able to accomplish these kinds of goals through their participation in ECC/GT. This success is at least partly a result of the kinds of duties which students were given on the job. For the most part, students were allowed to do a variety of interesting tasks, including hands-on experiences when possible, rather than being asked to perform clerical or messenger tasks. Having students perform fairly low-level jobs is a problem common to many programs like ECC/GT, and this project does seem to have avoided that pitfall. The calibre of the students involved in ECC/GT--which community instructors were certainly able to recognize--should be at least partly credited with this success.

Publicity and Recruiting

Based on comments from all the groups of Project participants interviewed, PSE feels that further work needs to be done on publicizing ECC/GT--that is, explaining both the ECC Program and the senior high school gifted and talented component of it separately. Targets for publicity must include: (1) teachers and administrators in each of the selected schools; (2) parents of involved students; and (3) the community instructors who are asked to work in the Project. None of these groups had a clear enough understanding of ECC/GT when it was initiated, and we feel that some misunderstanding--particularly among the parents and community instructors--may still exist.

We understand that some teachers in the selected schools resented students being taken out of their classes to participate in ECC/GT or resented students being taken out of other gifted and talented programs in order to participate. While most teachers now seem to be viewing the Project more

favorably, better explanations in the beginning may have helped to avoid an uncomfortable situation for the learning managers or the students involved. For example, students who have participated in this school year may be asked to give brief presentations at faculty meetings in the fall in order to discuss ECC/GT and what they gained by participating in it.

Similarly, students might be asked to speak at an information meeting for parents of students new to the Project in the future. One parent interviewed mentioned that parents had been invited to attend a meeting at the end of the project rather than at the beginning; she felt that an orientation meeting would have been much more beneficial to her understanding of her child's experience than this wrap-up session had been. PSE would agree that an opening meeting is more desirable than a closing, if only one such meeting can be held. An informational meeting might raise the parent's curiosity about ECC/GT enough to get them more actively involved in their child's learning experiences. Even given some lack of information about ECC/GT, it should be noted that parents seemed to be generally supportive of the Project and felt that their child had enjoyed his/her participation and learned from it.

Similarly, the community instructors were very favorably impressed by the Project, and many are looking forward to participating again. However, they themselves—as well as the learning managers and students—felt that the community instructors were somewhat unprepared for their participation. Many of the people interviewed felt that the community instructors did not understand what role they were supposed to be playing for the student and, therefore, may not have helped the student as much as they could have.

PSE believes that some official orientation must be provided for community instructors other than their initial talks with participating students

who are being assigned to them. For convenience, print materials would probably be the best method for communicating vital information about the Project. Based on our experience with other community programs and the testimony collected in Jefferson County, it seems that community instructors generally are not interested in coming together for a meeting since it takes time away from their work schedules. Thus, a print substitute probably needs to be found.

Publicity about ECC/GT is also important in the student recruiting process. Based on the testimony of students interviewed, it seems that recruiting for the Project was done in two ways: (1) teacher nomination; and (2) competitive tests. PSE believes that recruiting and selection procedures should be more uniform unless there is a good administrative reason why different schools must recruit in different ways. If teacher nominations worked well, there does not seem to be a good reason to give students another test in order to select them for participation in this Project. On the other hand, teacher nominations could be extremely biased--we do not have data on whether nominations were biased in this case--and thus the Project may want to avoid that strategy for that reason. Another strategy might be to invite students to participate based on their standardized test scores (whatever standardized tests are already used in the schools, such as the CTBS in Jefferson County), and then interested students from this group could be interviewed by the Project staff, guidance counselors, or selected teachers. In this way, one objective standard is used (test scores) and one subjective standard is used (the interview).

PSE believes that the Project staff should ask students who participated during the past school year for their opinions about different recruiting processes; in addition, the Project staff should also interview the learning managers particularly, as well as school administrators and a selection of

teachers, about the various recruiting options which are available to the Project. Their advice would be most helpful because they know the administrative workings and the likely reactions of professional staff and students in their own schools.

Structure of the Project

As designed, each student was to participate in several career explorations in the community (of a relatively short duration) as well as a longer, more intensive career internship experience. In our interviews with students, we learned that a number of them did not complete--or even start--an internship, but instead participated in a greater number of career explorations (more than the two or three planned for by the Project). We feel that the Project staff should examine the question of whether to make an internship experience a mandatory part of the Project.

Several learning managers commented that some students seemed to know exactly in what field they wanted to do their internship and thus went right into it without hesitation; those students had no problem in deciding to make a considerable time investment in one career area. However, some students explained that they were not yet ready to make that kind of commitment to one career field and that they felt multiple explorations were an equally valid way of spending their time in the Project in hopes of narrowing their interests among many career fields. Alternatively, one student did several explorations in the field of social services in order to narrow her interests to a specific occupation.

We believe that multiple explorations are an equally useful and beneficial way for students to participate in the Project and would suggest that

students be offered this option. If this alternative is made available, students who choose not to do an internship should not be made to feel that they are somehow inferior to those students who choose to do an internship. Some students did feel that they were "copping out" by not getting to the internship, even though they felt that multiple explorations were of greater benefit to them.

In addition to the explorations and internships, another Project component is employer seminars in which community employers come to the schools to speak on various topics of interest to the students participating in the Project. Students generally felt that the seminars were enjoyable and somewhat informative. There was, however, some feeling that the seminars were helpful to those students interested in the particular career being discussed, but not of much general help to the other students. In order to solve that problem, PSE would advise that the guest speakers be encouraged to make their presentation generalizable--at least in some areas--to different careers of interest to students; for example, employers might discuss preparation for a career, matching one's abilities and interests to a career, or choosing a lifestyle along with a career, both for their particular careers and others.

In a project which PSE evaluated several years ago and which was very similar to this one, employers and their interns gave joint seminars for the other participating students. Thus, the employers who come in to speak to students would always be those already involved in the Project, and their students would have a chance to work with them in preparing a presentation which they know will be of interest to their classmates. Since students do give presentations of their experiences to the other students already as part of the Project, inviting their employers to these presentations might

serve the same function, especially if employers are asked to take a small part in the students' presentations.

A major concern which must be considered in discussing the addition or modification of any Project component is the length of students' participation in the Project. Most people we interviewed--students and parents, particularly--agreed that students should be given more time each day to carry out their career explorations and internships. Since travel time to and from the job site cut into the actual time students could spend with their employers, a longer time lapse each day was suggested (perhaps four hours per day).

Furthermore, some interviewees also thought that the Project should be longer than one semester, especially if it could be supplemented with additional relevant academic assignments and seminars. PSE has evaluated another career internship program which does allow students to participate for more than one semester--with outstanding results--and thus this might be a consideration in looking to this Project's future in Jefferson County. Finally, several people noted that the fourth quarter was a difficult time to involve seniors in a special program like this one, and they wished it had been offered earlier in the school year for seniors--before their thoughts turned to graduation, college, or a future job.

Project Materials

Three types of Project materials drew many comments from the students who used them: (1) the students' yellow handbook; (2) students' journals, and (3) the variety of recordkeeping forms used in the Project.

The first version of the students' yellow handbook (used in the spring semester of 1978) was not well liked by students. They felt the handbook

was redundant and uninteresting; there were too many fill-in-the-blank exercises which did not require any real thinking on the part of the students. We learned that students have already made extensive recommendations to the Project staff on modifying the handbook, and we learned that many of those recommendations are being taken. We would agree with most of those we heard and feel that the students' recommendations will serve to make the handbook more appropriate for gifted and talented students.

Students particularly noted that the decision-making exercises in the book were ineffective; they felt they already knew the steps in the decision-making process and that they really did not change the way they made decisions, regardless of knowing certain steps in a certain process. PSE feels that students may have resented being told explicitly what the steps in the decision-making process were rather than being allowed to discover them inductively. An inductive approach to these exercises—and probably to many others as well—would probably hold the interest of these students better.

In discussing students' journals, PSE found that most students had at least slightly negative reactions to them. This is not at all unusual, and PSE has seen similar negative reactions to journals in other career internship programs. PSE would advise that journal entries not be required daily, but rather weekly, so that they become less routinized and more reflective. If students are allowed to pick out one particularly thought-provoking incident each week, they might be inclined to write a longer, more insightful journal entry than if they have to make daily comments.

We asked students whether they felt that keeping a journal would help them improve their written communication skills. They felt it would not since they were not required to write in sentences or use correct punctuation and grammar in the journals. If one of the Project's goals is to help students

improve their written communication skills, learning managers should be encouraged to impose more stringent English requirements on the journal entries. On the other hand, if the journals are designed to give students an outlet for expressing their feelings about their experiences and about any problems they may have encountered, then perfect English may not be so critical a requirement. On balance, we would recommend that correct English be required in journal entries because these students are capable of meeting high standards in written expression and should learn that most work they do in the future will require that they use good written English.

Despite the negative reactions, PSE would recommend that the journals be kept in the Project for another year, but that the Project staff give careful thought to redesigning them and rethinking the demands they make on students. We feel that the students themselves will have the best ideas on how to make the journals an important part of their experience in the Project.

Finally, learning managers and students were--almost without exception--disturbed by the number of recordkeeping forms they had to fill out for the Project. We would strongly suggest that the Project staff review each form carefully to make certain that the information being gathered is useful to the Project, feasible for learning managers and/or students to supply, and gathered only once rather than several times unnecessarily. Having learning managers and students fill out too many forms will, in the long run, damage the quality of their responses on the forms which are really valuable to the Project--both in assessing its current effectiveness and in planning for the future.

Project Staffing

In addition to the Project staff who operated the Project from the

central office, the Project was staffed by the learning managers in the participating schools. We spoke with four of these learning managers who felt the job was a combination of Project administration and coordination, teaching, and counseling (with least emphasis on counseling, particularly concerning personal problems of participating students).

Both the learning managers and students agreed that students were reluctant to bring problems to their learning managers to get help in solving them--even problems related specifically to their explorations or internships--at least in the beginning of the semester. One learning manager aptly pointed out that gifted and talented students are generally flexible and adaptable to various situations, and thus may have been able to solve their own problems themselves without seeking extra help from their learning managers. Furthermore, these students might have gained special satisfaction from being able to solve problems for themselves and would have felt embarrassed to have asked their learning managers for help.

Students felt that they had had the right amount of contact with their learning managers and did not feel the need for further supervision, such as visits by the learning managers to the job sites of their explorations or internships. Judging from PSE's experience with similar programs, gifted and talented students do not typically want on-site supervision because it makes them feel someone from the school is checking up on them, and thus they are embarrassed in front of their community instructors. Therefore, we would not recommend that further monitoring of students at their job sites be instituted.

It was quite obvious to us, based on the remarks of both students and learning managers, that the relationship between students and learning

managers in all three schools were excellent. Students were highly complimentary of their learning managers and truly viewed them both as friends and as teachers/counselors.

Students and learning managers were also complimentary of the Project staff and the efforts which were made in this past semester to operate the Project for the first time. Both students and learning managers felt that their advice on the Project was accepted well by the Project staff and felt that they had a role in shaping the Project for the future.

Project Weaknesses

Four specific problems were pointed out by the variety of people we interviewed, and all four seemed to be noteworthy. First, students' transportation to and from the job sites was difficult in many cases, and some parents and learning managers felt that transportation may have been a limiting factor in determining which gifted and talented students could participate in the Project. Transportation is usually a problem in programs like this one and can be very difficult to solve. We understand that the Project staff is already working on some alternative plans, and we know that much further investigation will be needed.

Second, it has been suggested that a curriculum be developed for the ECC/GT Project to supplement the on-site experiences and other activities of students. One learning manager advised that such a curriculum might be a series of independent studies in the traditional academic subjects, but infused with career education. In this way, students could still earn academic credit, but the content of the independent study would have a career slant and thus would be tied into the ECC/GT Project better. One learning manager has already been doing this on her own this past semester, and we think it

sounds like an excellent idea. PSE would suggest that the Project staff look closely at those projects which students completed and discuss with them the comparison between those career-oriented projects and the more typical independent studies they have undertaken in the past. If students and the learning manager judge these assignments to be particularly successful, PSE would recommend that this strategy be used more widely in the future.

Third, learning managers commented that they would like an orientation or in-service in which special techniques for teaching and supervising gifted and talented students were presented to them and explored more fully than they have had the chance to do this year. One learning manager suggested that they themselves go through the experiences which the students will participate in--both on-site and school-based activities and exercises. PSE feels that this is quite an interesting training idea and one which the Project staff should consider as new staff are being trained and added to the Project.

Fourth, while the reaction to the Project from community instructors was quite favorable, one learning manager mentioned that these employers should be picked to participate based, at least in part, on their ability to work with students. We all know that many people may excell in their careers, but are not able to help students understand what they do on their jobs or help students make decisions about their own futures. Thus, PSE would agree that employers should be screened for their ability to work with students as judged either by past work those employers have done with young people or through a serious interview with the Project staff or learning managers who will need to assess those employers' potential for dealing with young people.

Project Strengths

When asked to identify strengths of the Project, many people answered in terms of Project goals which students were able to accomplish through their participation. Those goals are listed in the first section of this site visit report and will not be repeated here. PSE feels that most people we interviewed felt that students had accomplished the goals listed.

When students were asked about the Project, they especially noted that the Project had helped to make them more self-assured in dealing with adults, particularly in a working situation, and had helped to give them valuable employability skills, particularly job-getting skills such as knowing how to conduct themselves during job interviews and presenting themselves well on the telephone with prospective employers.

Many students also commented that the Project had given them a sense of belonging to a group, which they had not previously had in school. Students explained that it was not fashionable to be considered "a brain" or "gifted and talented" and that they now had a peer group which could give them the moral support they needed, especially when working through problems they encountered during their internships or explorations in the community.

Several of the learning managers testified that one of the biggest strengths of the Project was that it enabled students to take responsibility for their own learning--something which gifted and talented students should be challenged to do--because of the individualized nature of the Project. The learning managers also felt that students were able to make the connection between the knowledge and skills they learned in school and the knowledge and skills they needed on the job--an important connection for all students to be able to make.

In summary, PSE believes that the Project was successful in producing both affective and cognitive gains in the students who participated in the Project. In addition, the adults associated with it--learning managers, parents, and community instructors--all seemed favorably impressed by the Project's initial efforts and are looking forward to more good work by the Project staff in the future.

END-OF-THE-YEAR REPORT

PROFILE OF PARTICIPATING STUDENTS

About 35 students from three high schools in Jefferson County--Arvada West High School, Bear Creek Senior High School, and Golden Senior High School--took part in the ECC/GT Project in the spring of 1978. Based on impressions gathered during PSE's site visit to Jefferson County, we would say that the students were bright, energetic, interested in learning (both in school and out of school), mature, and sociable. They were students who could clearly benefit from participating in a program like EEC/GT, because they had the initiative to create a valuable learning situation for themselves in the community--with the help of their learning managers and community instructors--and because they were able to cope well with an individualized, relatively unstructured experience.

Scholastic Ability

Given the designation of the Project as one for gifted and talented students, those who participated were obviously quite intelligent, as judged by their CTBS scores and grade point averages. (Those gifted and talented high school students who made up the comparison group--and thus were not involved in the Project--posted equally high CTBS scores and grade point averages. In fact, the mean grade point average for the comparison group was 3.75 as compared to 3.4 for the ECC/GT students.)

Past Work Experience

About 80 percent of the ECC/GT students had worked for pay outside their homes on a regular basis before enrolling in the Project. Two-thirds of those students had worked as unskilled laborers. (The comparison group

looked much the same.) Thus, most of these students had previously been involved in work situations in the community and may have already gained some of the knowledge and attitudes which the Project was designed to give them. Of course, the explorations and internships which were part of the Project were planned to be in higher level occupations rather than the unskilled ones which most students had experienced on their own.

Future Plans

About 85 percent of the ECC/GT students planned to attend a four-year college or university upon graduation from high school. About 40 percent of them also felt they would be working part-time in addition to their schooling. In terms of their long-range plans, about 40 percent felt they would finish a four-year college or university program, while 45 percent felt they would continue with graduate or professional training beyond college. (The educational plans for the comparison group were virtually the same.)

Students' career plans were coded according to Hollingshead's socioeconomic status system and showed that 45 percent of the EEC/GT students' first choices for a job was as a higher executive or major professional, about 25 percent as a business manager or lesser professional, and about 30 percent as an administrator or minor professional (the first three categories in the system). Students' second choices were much the same. (There were no differences in the comparison group's future career plans.)

About 40 percent of the ECC/GT students (and the comparison group students) had already observed or worked at both their first and second job choices, and another approximately 30 percent had already observed or worked at one of the two jobs indicated. Thus, about three-quarters of the students had gained

some experience with the jobs they thought they might like to hold upon completion of postsecondary schooling, though they may have been simply observing rather than working at the jobs.

Preparing for a Job

About 35 percent of the ECC/GT students felt that the steps they needed to take to prepare for and enter the jobs they would most like to hold after completion of postsecondary schooling were pretty clear, and another approximately 35 percent felt these steps were quite clear. Thus, about two-thirds of the students seemed to have a good grasp on how to accomplish their career goals.

Virtually all of the ECC/GT students felt that they would be able to complete the steps leading to the job they wanted. (Results for the comparison group were quite similar.)

Summary

Most of the data presented above were collected on the Student Background Questionnaire developed by the Northwest Regional Educational Laboratory (NWREL). While this instrument was administered at the beginning of the Project, some questions--such as those dealing with future educational and job plans and preparation for them--were also asked at the end of the Project in the Student End-of-Year Questionnaire developed by NWREL. There were virtually no pre-Project to post-Project changes in ECC/GT students' answers to these questions.

These results seem reasonable since PSE believes that a short-term project like ECC/GT could not or would not change the general education and job plans of high school students--and it is probably not designed to do so. As later evidence will show, students did learn a great deal about different jobs and working with adults in a real working situation, but they did not, for the

most part, make dramatic changes in their future plans. Most gifted and talented students would be planning to go on to a four-year college or university, and many would be planning to continue in further graduate or professional training. Similarly, most would be planning to obtain an executive or professional level job (except for a small minority of students who might be interested in the arts). Finally, most gifted and talented students would have a general idea of the steps they would need to take to attain their educational and career goals. Thus, the data presented above seem to be an accurate portrayal of typical high school gifted and talented students--both before and after participation in a program like ECC/GT--as evidenced by the great similarity in responses from students in the comparison group.

EVIDENCE OF STUDENT LEARNING

Five different tests and questionnaires were administered to students to try to measure both cognitive (knowledge) and affective (attitudinal) learning which they may have gained from their participation in ECC/GT. Parents of participating students were also asked to attest to learning gains their children had made through their responses to the ECC Parent Opinion Survey developed by NWREL. Those responses will be included in this section of the report.

The following instruments were used to measure student learning:

1. The High School APL (Adult Performance Level) Survey developed by The University of Texas at Austin and published by the American College Testing Program. This is a test of basic skills (reading, writing, computation, and problem solving) applied to life areas (government and law, health, consumer economics, occupational knowledge, and community resources). The APL is a 40-item cognitive test.

2. The Career Skills Assessment Program (CSAP) developed by The College Board. Six skill areas in career planning are measured by separate cognitive tests. Only three of these tests were used with ECC/GT students. They were the tests measuring: (1) self-evaluation and development skills; (2) career awareness skills; and (3) career decision-making skills.

3. The ECC/GT Field-Based Test developed by PSE. This field-based test contains eight cognitive items with multiple parts and 24 affective items to which students respond on a 5-point strongly agree-strongly disagree scale. The test was developed by observing students at their internship sites and interviewing students in order to understand the kinds of cognitive and affective learning which were taking place. Items were written to match those areas of learning. This approach was developed by PSE for use in evaluating programs where a formal curriculum is either not available or not being used as planned.

4. The Student Attitude Questionnaire (SAQ) developed by NWREL. The SAQ contains scales dealing with: (1) Career Exploration (to determine how often students explored a career of interest to them); (2) Education and Work Attitudes (to determine students' perceptions of education and work); (3) Life Skills Attitudes (to determine students' attitudes in such areas as personal development and creativity); and (4) competencies on an Experience Checklist (to determine what kinds of functional life skills students have attained competency in). Only the second and third scales really measure affective development in students, and even some of those items are not attitudinal. Students respond to a series of statements on a 5-point frequency scale, a 5-point strongly agree-strongly disagree scale, or a yes-no basis.

5. The Student End-of-Year Questionnaire developed by NWREL. Several of the items in this questionnaire are designed to gather data on knowledge gained by students as a result of ECC/GT, although many other items simply gather student background information (as discussed in a previous section of this report).

All five instruments were administered on a posttest-only basis, and there were comparison groups for the first four instruments listed. Overall, no differences between the ECC/GT students and their comparison group were evidenced on any of these instruments (several exceptions will be explained in this section of the report).

PSE does not believe, however, that these data can be interpreted as meaning that the ECC/GT Project was not a success. Many firsthand observations and much testimony by a variety of community members, educators, and students suggests the contrary. Rather, PSE feels that the selection of instruments used to evaluate student learning was unsatisfactory.

AFL

The AFL is designed to measure minimal functioning of adults in everyday life--for example, reading a bus schedule, reading a label on a medicine bottle, counting calories in food, reading leases, and reading advertisements. Gifted

and talented students have been functioning at this minimal competency level for at least several years by the time they reach high school. For that reason, it would be virtually impossible to show differences between ECC/GT students and a comparable gifted and talented comparison group.

Indeed, the ECC/GT students answered correctly four or five more questions (out of 40) than the comparison group students did. This is not a meaningful difference, especially when there were 12 seniors in the ECC/GT group along with many sophomores and juniors, but no seniors in the comparison group. The ECC/GT students got about 36 of the 40 items correct, just slightly beating the comparison group students who obviously knew most of the answers, too.

The Project staff received very negative feedback from students about taking the APL. Many said they had taken it numerous times in school before and felt that they were considerably smarter than the test. They commented that they doubted that the test would differentiate between ECC/GT students and a comparison group of other gifted and talented students. They were clearly right.

While improving basic skills--particularly as they are used in a real working situation—is an aim of this Project, the APL is not a sufficiently difficult or sensitive instrument for measuring that aim. We would strongly recommend that it not be used again to evaluate student learning in this Project.

CSAP

Since there were virtually no differences between the ECC/GT students' scores and those of the comparison group students on any of the three skills tests from the CSAP and since most of the students did extremely well on the

tests, it can be concluded that students learn the answers to questions like these during their regular school or life experiences. Gifted and talented students probably learn them earlier than regular students. Thus, the tests were insensitive to the treatment provided by the Project.

Of the 16 objectives measured across the three skills tests, ECC/GT students scored below 85 percent correct responses on only 4 of the objectives. The comparison group students scored slightly higher even than that. Thus, PSE would not recommend that this test be used again to measure the achievement of gifted and talented students.

It is interesting, however, to see the areas in which the ECC/GT students scored particularly well and least well. We found that:

- in the self-evaluation and development skills test, students scored:
  - particularly well (an average of 95% correct responses) on items measuring their ability to understand individual differences, to evaluate individual characteristics and understand test results, and to apply knowledge about themselves to career opportunities; and
  - least well (87% correct responses) on items measuring their ability to locate and interpret information about themselves;
- in the career awareness skills test, students scored:
  - particularly well (an average of 91% correct responses) on items measuring their ability to relate abilities, values, needs, and experience to career choices and to know facts about career opportunities; and
  - least well (an average of 74% correct responses) on items measuring their ability to locate, evaluate, and interpret information for career choices and to find out about educational requirements for occupations;
- in the career decision-making skills test, students scored:
  - particularly well (96% correct responses) on items measuring their ability to establish an action plan; and
  - least well (an average of 82% correct responses) on items measuring their ability to discover probable outcomes and to eliminate alternatives systematically.

These results might be interesting to Project staff as they consider areas of student learning which are relative strengths and weaknesses for participating ECC/GT students.

The overall test results for the three different skills tests were quite similar, with ECC/GT students giving about 90 percent correct responses on the self-evaluation and development skills test, about 88 percent correct responses on the career decision-making skills test, and about 86 percent correct responses on the career awareness skills test. As has been discussed, comparison group students scored comparably, though slightly higher than ECC/GT students on the career awareness skills test.

ECC/GT Field-Based Test

The cognitive items which PSE developed for the field-based test were as insensitive as the cognitive items in the APL and CSAP. There are two reasons for the inability of these items to discriminate between the ECC/GT students and the comparison group students: (1) the items were simply too easy, and thus students both in and out of the Project could answer them with equal success; and (2) some of the items on which ECC/GT students might have shown their superiority were simply uninteresting to students, and they did not give as good an answer as they might have. (For example, students were asked to list as many resources as they could for learning about careers; the typical ECC/GT student and comparison group student each listed about five resources. PSE strongly feels that ECC/GT students could have listed many more than five resources, but they simply were not interested in doing so.) As we learned in face-to-face interviews with many of the students, they need to feel at least somewhat challenged in order to give their best performance and do not like to feel as if they are being talked down to by Project materials or the evaluation instruments.

Interestingly enough, about 50 percent of the ECC/GT students as compared to 30 percent of the comparison group students were able to list the steps in the decision-making process. We feel this is a meaningful difference in performance and would comment that the decison-making process was specifically taught as part of the ECC/GT Project. Thus, those students did learn that specific information, regardless of whether they now use it to make better decisions.

Among the affective questions measuring students' attitudes towards themselves, school, and the world of work, some noteworthy differences between the ECC/GT students and the comparison group students were apparent. More ECC/GT students strongly agreed that:

- they believed they could handle themselves well in working situations;
- schools should have to prepare students for the "politics" of holding a job in the world of work;
- students should question what adults tell them;
- gifted and talented students did need to learn about the world of work in high school even though they will probably be going on to college or to other professional training;
- they felt capable of identifying their preferences in working situations (such as steady routines vs. changeable schedules);
- it was important for people to evaluate their own work on a job;
- it was important to recognize and appreciate jobs done well by others;
- adults in the world of work did let their emotions affect their behavior;
- an employer, in many ways, could be similar to a teacher;

- they could analyze their strengths and weaknesses effectively enough to choose a career field of interest;
- knowing what their limitations were was just as important as knowing what their talents were;
- out-of-school learning experiences could be as valuable as school classes and activities; and
- school did not do a good job of teaching students how to interact with adults.

These items show a good range of positive student attitudes toward themselves, adults in working situations, and the world of work itself. Many of the items cover topics about which students cannot learn in school, but rather need the kind of community internship or exploration work they received through the ECC/GT Project.

SAQ

Of the four scales in the SAQ (described earlier in this section), only the Career Exploration Scale showed a statistically significant difference (at the .05 level of significance) between the pretest to posttest change of the ECC/GT students vs. the comparison group students. Students were asked to indicate how often during the past year they had experienced, learned about, or thought about a job of interest to them. For example, students were asked if they had:

- talked about the job or career field with persons employed in that career field;
- read materials about the job or career field;
- observed activities related to the job or career field;
- learned the range of pay for the job or career field;
- learned the level of schooling or type of training generally required to enter the job or career field;

- thought about the relevance of their current junior or senior high school program to the job or career field;
- learned what levels of basic skills are needed to enter the job or career field;
- thought about how the job or career field is likely to change over the next 10 years; and
- thought about the job or career field's activities they would enjoy the most.

The first few examples describe activities the students might have participated in in order to learn more about a job of interest to them, while the rest describe cognitive learning--and in a few cases affective learning--which might have taken place during the course of the Project.

The fact that ECC/GT students scored significantly better on this scale shows that they were involved in specific Project activities which the comparison group students were not involved in. Thus, the ECC/GT students were thinking about and learning about careers more directly than those students not participating in the Project.

Student End-of-Year Questionnaire

This instrument contained several items designed to measure cognitive learning of students; several were similar to those used in the field-based test discussed earlier. Specifically, students were asked to list ten different things a person should think about in choosing a job or career, give six reasons why some people who are willing to work find it hard to get a job, and list five things they could do to decide whether to pursue training in a certain job or career field of interest to them. ECC/GT students scored relatively unimpressively on these three items, giving from approximately 50 percent to 70 percent correct responses to each question. PSE would make the same criticism of these items that it made of some our own field-based

items—that is, the students simply became bored answering them and stopped listing answers before they had really run out of ideas. Our face-to-face interviews show that students have greater facility with the kinds of information being solicited in these questions than they demonstrated on these questionnaires.

ECC Parent Opinion Survey

Two questions in the ECC Parent Opinion Survey call for parents to comment on cognitive and affective learning which they feel their children have acquired as a result of participation in the ECC/GT Project. When asked what changes they had noticed in their son or daughter which they thought resulted from participation in the Project, about 60 percent of the parents said they felt he or she had a better understanding of jobs, about 45 percent felt he or she had a clearer direction about his or her future, and about 35 percent felt he or she had greater self-confidence.

When asked what knowledge, skills, or attitudes their son or daughter had acquired through the Project which they felt would not have been acquired from the regular school program, parents gave the following answers:

- firsthand knowledge of one or more businesses/ occupations (about 90 percent responding);
- a chance to try out some job-related tasks (about 65 percent responding);
- working with other people (about 50 percent responding);
- firsthand knowledge of demands in the "real world" (about 40 percent responding);
- on-the-job skills (about 40 percent responding);
- self-discipline and responsibility (about 35 percent responding); and
- an opportunity to apply problem-solving and decision-making skills (about 35 percent responding).

These comments cover a nice range of both cognitive and affective learning about both the world of work and the students themselves. Parents would certainly be pleased with results like these, and our face-to-face interviews with parents confirmed that indeed they were. (Responses of parents to other questions about the Project are detailed in a later section of this report.)

Summary

While the news from these mostly standardized, completely paper-and-pencil tests regarding the success of the ECC/GT Project in producing student cognitive and affective learning is not very heartening (with the few exceptions cited above), PSE would urge that these results be interpreted cautiously. We would repeat that most of these instruments proved to be inappropriate for the high ability level of the gifted and talented students both in the Project and in the comparison group. Thus, the instruments were insensitive to learning which might have been produced.

Because of these drawbacks, PSE is inclined to rely on our firsthand impressions of the students (gained through face-to-face interviews) and the testimony of parents, learning managers, and students themselves about the new knowledge and greater understanding they gained from their community explorations and internships.

We would hypothesize that gifted and talented students not in the Project might pick up information about the world of work through other school or life experiences, but would not have the firsthand understanding of what that information means. For instance, all gifted and talented students certainly know that there are internal politics which affect the operation of any business or organization; however, gifted and talented students who have participated in the ECC/GT Project would understand what it is like to be in

the middle of those internal politics and have them affect their work and the work of others. That kind of experiential learning might have a greater impact on the student.

In trying to measure student learning as a result of this Project in the future, PSE would recommend that performance tests--rather than paper-and-pencil tests--be developed; this type of testing would be sensitive to ECC/GT students' greater ability to cope with the kinds of situations which arise in the world of work since they have been exposed to real working conditions during their community explorations and internships. Performance testing will let the Project staff judge how well students can handle themselves in the kinds of situations which they will meet later on the job. While actual performance situations may be difficult to identify for testing purposes (it may not, for instance, be convenient to observe the students at their work sites in order to judge how they cope with various problems which arise), simulated performance situations might be developed for use in testing students in school.

Simulated performance testing is common in many career fields. For example, candidates for the diplomatic corps are given a stack of correspondence in varying degrees of importance and urgency and asked to handle the mail as expeditiously as possible within a certain time limit. Testing situations appropriate for students involved in explorations and internships could be developed in a similar fashion.

Either individual or group testing might be used. Given the highly individualized nature of the ECC/GT Project, individualized testing might be more sensible--and probably more sensitive. However, group situational tests might be developed for students interning in similar job fields (public administration, for example).

In addition to performance testing, PSE would recommend that individual intensive interviews be conducted with students as a way of gaining a more accurate picture of the cognitive and affective gains they have made during the course of the Project. Interviews should be conducted prior to participation and again at the close of the Project. The same interviewer should be used so that the best interpretation of the pre-Project and post-Project data can be made. That interviewer should be totally disconnected from the Project so that he/she can take an objective view of the students involved. If more than one interviewer is used because of large enrollments in the Project, inter-rater reliability may need to be established.

If possible, this same kind of pre/post interviewing should be conducted with a comparison group of gifted and talented students in the same grade levels so that a credible assessment can be made of the average gifted and talented student's growth and maturation over the time the Project is in operation. If interviews cannot be conducted with students from a comparison group--because of time or financial constraints--PSE would recommend that case studies of participating ECC/GT students be used as a primary method of evaluating student learning from the Project.

(Other comments about the kinds of student learning produced by the Project are included in the site visit report presented earlier in this report).

TESTIMONY ABOUT THE PROJECT

In addition to the instruments used to measure student learning as described in the previous section of this report, a variety of student, staff, and parent questionnaires were used to gather testimony about the effectiveness of the ECC/GT Project. Data from those three populations collected on NWREL's Student End-of-Year Questionnaire, ECC Parent Opinion Survey, and ECC Staff Opinion Survey will be reported here. An NWREL instrument was also used to collect impressions and opinions from the community instructors who worked with the students at the work sites, but the responses of those community instructors working with ECC/GT senior high school students were not kept separate from the rest of the responses; thus those data will not be reported here. (Results from the survey of all community instructors are reported in NWREL's final report, Evaluation of the ECC and ECC/GT Programs in Jefferson County Public Schools, dated September 15, 1978.) Testimony about the ECC/GT senior high school students was obtained from representative community instructors during PSE's site visit, and those remarks are presented earlier in this report.

Overall Value of the Project

On a five-point scale--from 1 (poor) to 5 (excellent)--ECC/GT students rated the overall quality of the Project at approximately 3.6, a relatively high rating compared with their other responses. The typical student also said that he/she would probably decide again to participate in the Project if he/she had it to do over.

PSE believes that these slightly positive responses do reflect some of

the early organizational problems which any project faces initially. These students were the first students to participate in the Project, and the Project certainly benefitted from and was changed by this first experience.

Parents of participating students were somewhat more positive, noting that they certainly would want their son or daughter to participate in the Project if he or she had to decide over again.

Both students and learning managers were asked to rate the helpfulness of the Project in assisting students to accomplish a number of specific learning objectives. Students felt that their ECC/GT experiences were <u>most helpful</u> in assisting them to:

- produce "new" knowledge in a career field of interest to them;
- learn how their interests and abilities fit into potential careers (career planning);
- know what level of basic skills proficiency is required in the jobs of interest to them;
- know what to look at when considering a job; and
- learn the basic skills necessary for the careers that interest them.

These objectives cover the areas of career planning, career awareness, and understanding the importance of what is learned in school and how it can be useful on a job. Learning managers agreed that the Project had been most helpful to students in learning how their interests and abilities fit into potential careers and very helpful in learning the basic skills necessary for the careers that interested them.

Students felt that the Project had been of <u>little help</u> in assisting them to:

- solve problems logically;
- improve their writing skills;

- understand the democratic process;
- improve their reading skills; and
- improve their math skills.

It is extremely interesting that all but one of these objectives deal with improvement in students' basic skills--which was an aim of the Project. Since gifted and talented students' basic skills are usually quite good, it takes considerable emphasis and probably direct instruction to improve them further. The Project did not make that kind of effort. As explained in the site visit report, for example, students were not required to pay attention to the technical quality of their writing when keeping their journals; that would have been a fine opportunity for working on improved writing skills directly.

Students rated improvement in oral communication skills somewhat higher than those listed above. Based on our interviews, students felt that they were learning to present themselves well to prospective employers during telephone conversations and personal interviews, for example. Other students probably also gained some experience in speaking to small groups of people or taking part in group meetings--both of which would improve their oral communication skills. Thus, the Project has done a relatively good job in that area.

Comparison with the Regular School Program

Both students and their parents felt that the ECC/GT Project gave students about the same degree of opportunity for general learning (that is, basic skills) as the regular school program. PSE feels that, lacking any direct instruction in the basic skills, the Project probably provides less of an opportunity for students to improve their basic skills.

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Both students and their parents also agreed, however, that the Project was more motivating to students than the regular school program (parents were slightly more positive than students). Certainly, the novelty of spending time in the community doing interesting work with interested adults has every potential for being more motivating to high school gifted and talented students who may be becoming less and less challenged by their regular school work. Students commented frequently that they gained experiences in the community at their work sites that they never could have gained in classroom settings; that would be motivational.

Finally, both students and their parents agreed that the Project provided students with a much greater opportunity for learning about careers than the regular school program did. That was, of course, the central purpose of the Project and is not typically the central purpose of most high school courses. In our interviews, parents, staff, and students most frequently commented that the opportunity to learn about careers firsthand through the work experiences was perhaps the greatest strength of the Project.

Finally, parents felt that the Project was slightly better overall than the past school experiences of their son or daughter and that they felt their son or daughter liked the Project better than most of his or her past school experiences.

In general then, students and parents seem to be slightly more pleased with the ECC/GT Project than with the regular school program offered to these gifted and talented students during their senior high school years.

Structure of the Project

Both students and learning managers were asked to rate the different learning activities which make up the ECC/GT Project in terms of their bene-

fit to students and effectiveness in achieving the purposes of the Project. Students gave the highest ratings to the internships, the explorations, and the extended explorations in that order. These three major activities in the Project also received very high ratings from the learning managers.

Students gave about average ratings to the employer seminars, while teachers gave fairly low ratings to these seminars. PSE has made suggestions for improving them in our site visit report presented earlier in this report. We suggested, for instance, that the student participate in the presentation of a seminar with his/her employer rather than having an employer make a presentation by himself/herself. We also suggested that each speaker make at least part of the presentation appropriate for all students, regardless of their interest in the specific career field being discussed.

Both students and their learning managers gave low ratings to the student journals which were a Project requirement. PSE has made many suggestions for improved use of student journals in our site visit report. For instance, if students were required to make journal entries less frequently (such as weekly entries instead of daily entries), those entries would be more insightful, more creative, less routine, and longer. As mentioned earlier, the journals could also serve as an available tool for working on improved written communication skills with these students.

One major disagreement between students and learning managers is evident. While students gave fairly low ratings to their orientation to the Project, learning managers gave the student orientation rather high ratings. PSE does not have the additional data needed to judge the reasons for this discrepancy, but would suggest that the Project staff get ideas from the students themselves about ways to improve their orientation and then work with the learning managers to improve this activity.

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Project Weaknesses

The biggest single weakness--cited by students, learning managers, and parents--was the difficulty in making transportation arrangements for participating students. As we mentioned in our site visit report, transportation is frequently the greatest obstacle faced by community-based internship programs like this one. It always takes some time to get these difficulties taken care of, and we know that the Project staff have been working in this area.

Second, about 45% of the students and 35% of the parents felt that there were problems in the organization and staffing of the Project. As mentioned earlier, the Project was being conducted for the first time and would undoubtedly be subject to some administrative and organizational confusion. PSE feels that the Project operated relatively smoothly and that it was adequately staffed--both in the central office and in the schools. The Project did get a late start, but has been offered again in the 1978-79 school year, with the modifications suggested from its trial run.

Third, about 35% of the parents felt that their son or daughter had to sacrifice other interests (such as extracurricular activities) in order to participate in the Project. This is probably an accurate statement, but whether parents should judge it to be a weakness of the Project is questionable. Project staff should speak with students to see whether they feel they are making an unfair trade-off between the Project and other school, home, or community activities which are more important to them. We feel that they are generally satisfied with any trade-offs they have had to make in order to participate in the Project.

Fourth, parents noted that they had not had much contact with Project staff--presumably neither central office staff nor learning managers in the

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schools. They also indicated that they were not getting too much information about the progress of their son or daughter in the Project. While they did not term this lack of contact or information a weakness of the Project, PSE feels that the Project staff should make a greater effort to involve the parents in the Project more frequently. We suggested in our site visit report that an orientation meeting (in addition to the wrap-up meeting which was held for parents) might be a good way to get important information to parents from the beginning. Parents might also be invited to attend a series of presentations made by the students on their internships.

Fifth, there has been some discussion by students, learning managers, and parents about the length of the Project. While there was some feeling for making the Project longer than one semester, most people at least felt that students did not have enough time at their work site each day. PSE would suggest that the Project staff explore new scheduling options which would allow the students to be at their work sites for at least half of every day (exclusive of travel time) and would suggest that a trial two-semester project be run with a select number of highly capable students to see whether students would benefit significantly from such extended participation.

Sixth, learning managers and students felt that there were excessive paperwork requirements (as noted in detail in our site visit report). We understand that the Project staff is already working toward eliminating forms and reporting requirements which are not judged to be extremely important to the operation of the Project.

Finally, in addition to the weaknesses mentioned above and gathered from the written questionnaires, PSE would recap three recommendations based on other weaknesses cited during our site visit and explained in that

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report: (1) a curriculum might be developed to supplement the students' community-based learning experiences and might consist of a series of career-infused independent study projects in major subject fields; (2) a more extensive and intensive inservice program for the learning managers should be established and should focus on successful ways of working with gifted and talented students; and (3) the selection of community instructors should be made at least in part on their ability to work with students rather than simply on their willingness to participate in the Project or their understanding of their career fields.

PSE believes that the Project staff are already working on many of the problems described above and would encourage them to talk frequently with students in particular to get their reactions to new solutions which are tried.

Project Strengths

Many strengths of the ECC/GT Project were cited both in the written questionnaires and in our face-to-face interviews with students, learning managers, and parents. From the questionnaires, students and parents strongly agreed on four strengths of the Project; the Project was:

- an opportunity for students to learn about real life situations and responsibility (about 45 percent of the students responding and 80 percent of the parents responding);
- an opportunity for students to learn about a variety of careers (about 35 percent of the students responding and 50 percent of the parents responding);
- a good alternative to the regular school program (about 30 percent of the students responding and 50 percent of the parents responding); and
- well staffed (about 30 percent of the students responding and 35 percent of the parents responding).

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From our face-to-face interviews with students, we learned that students also felt that the Project made them more self-assured in dealing with adults, gave them better employability skills, and gave them a sense of belonging to a group which they did not frequently get in school where gifted and talented students were somewhat alienated.

Parents noted many other strengths, viewing the Project as:

- a good experience in working with adults (about 85 percent of the parents responding);
- an opportunity for students to acquire a sense of independence and responsibility and an opportunity to apply decision-making skills (about 60 percent of the parents responding);
- an opportunity for the students to receive guidance in career planning (about 50 percent of the parents responding);
- an opportunity for students to receive individual attention and to become involved in their own learning (about 45 percent of the parents responding);
- a good way to apply school-learned skills to real life situations (about 45 percent of the parents responding); and
- a good way of motivating students to learn (about 40 percent of the parents responding).

In addition, many parents felt that the Project was a help to their son or daughter in forming his or her career plans.

Finally, the learning managers thought that the greatest strengths of the project were in helping the students assume the responsibility for their own learning (the parents agreed with this, as mentioned above), in showing students the connection between what they learn in school and what they will need to work well in a job later on (the parents agreed with this, as mentioned above), and in bringing the school and community closer together through the relationships fostered between the students and the community instructors.

PSE believes that the strengths mentioned by the various student and adult populations involved with the Project cover a range in student learning --from self-understanding to understanding the relationship of school and work to understanding what the real world of work is all about to understanding how to plan to enter that world. The Project staff should be well pleased that they have helped the students accomplish so much.

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